EMUNCTOLOGY REFERENCE MANUAL

GENERAL EMUNCTOLOGY COUNCIL
SALUS EMUNCTORIUM LABOR
®

Emunctology
Reference Manual

Emunctology Reference Manual

For the Clinical Practice of Emunctology Having The Full Understanding of The Workings of The Body in Health and Dis-ease

"If This Theory Be True, It Upsets All Other Theories." *- "Richmond Whig Newspaper", 1870's*

"Even as the Son of man, came not to be ministered unto; But to Minister, and to give His Life a ransom for many." *- Matthew 20:28*

"Let no corrupt communication proceed out of your mouth, but that which is Good to the Use of Edifying, That it may Minister Grace unto the Hearers." *- Ephesians 4:29*

"I will publish the name of the LORD; ascribe ye greatness unto our God. He is the Rock, His work is perfect; for all His ways are judgement; a God of Truth and without iniquity, just and right is He." *- Deuteronomy 32:3-4*

The Lord Thy God

"I AM the Light of the World;
he that followeth Me
shall not walk in darkness,
but shall have the Light of Life." *- John 8:12*

Here, Light is Shed, Upon These Well Established Therapeutic Means;
In which, one may Give Proper Care to the seeker;
And this is the ultimate Aim of All Emunctology Teachings

His Promise

"Come and know ye Me, and I will give thee that knowledge that thou hadst with me since the foundations of the world." *- Isaiah 40:21*

"Before the world was, I AM! Now if ye abide in me and I in the Father, then I will bring to thy remembrance All Things from the foundations of the world!" *- John 14:26*

"If ye shall ask any thing in my name, I will do it." *- John 14*

"For, To him that loves Me will I, and the Father come,
and We will abide with him; directing him in the choices made in his dealings
with his fellow man day by day." *- John 14:17*

"Be not afraid, for I will not Leave thee comfortless.
If I go not away the Comforter will not come, but when he comes
He will abide with thee always" - *John 14:18*

"If ye will obey My voice indeed, and keep My covenant,
then ye shall be a peculiar treasure unto Me; above all people;
for all the earth is Mine; And ye shall be unto Me a Kingdom of Priests,
and an Holy Nation." *- Exodus 19:5-6*

"I will Instruct thee, and Teach thee, in the Way which thou shalt go:
I will Guide thee with Mine Eye." *- Psalms 32:8*

"The Lord Opened My Eyes, so that I could See." *- Emanuel Swedenborg, in "The Life and Mission of Emanuel Swedenborg", 1901.*

The Circle with the Cross
These make for the Sign that;
All thou hast heard is Fulfilled in Him

Hospitallers Order of the Good News

The Lord He Is God

Trust in Him who Is the Way

"LORD, my strength, and my redeemer." - Psalms 19:14

Keep thy faith in Him, that All will be and is right!
Be mindful in thy going ins and coming outs.
Be True to that Thou Knowest, and be sure the
Foundation is in Him. And make thy life
Thy activities in accord with same!

"My son, attend to my words; incline thine ear unto my sayings. Let them not depart from thine eyes; keep them in the midst of thine heart. For they are life unto those that find them, and health to all their flesh." *- Proverbs 4:20-22*

"They that are whole have no need of the physician, but they that are sick:
I came not to call the righteous, but sinners to repentance." - Mark 2:17

Book Title: Emunctology Reference Manual

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May The Good News Pass From One to Another

"What can they do, without: *"The Sword of the Spirit, which is the Word of God."*

When we speak to them of God, as the great Creator of everything they see, and the Father of all, they say: *"That was what we were longing to know."*

But to know that they were children of this Great Universal Parent, and that He cared for them more tenderly, and individually, than they did for their own children, this gave them spirit to work on in hope, and to cast their care on One who, they now knew, cared for them. Then, when we speak of Jesus; and His life of love, and toil for them, and His painful death, their hearts respond to the thought of His loving, ever-present sympathy.

When we speak of the work of the Spirit, they will say:

> *"We wonder how we could have lived so long without them. For the first time in our lives our hearts are satisfied; some inward craving, which has kept us restless and dissatisfied, is stilled; we seem to have drunk from some life-giving fountain, and our thirst is quenched."*

All this, they have learned from the Teaching contained in these Manuscripts.

> *"We carry them away with us with heavy hearts, with a feeling as if we were leaving hungry people without bread. We long for the time when there shall be enough for every one."*

Then John Wycliffe would tell them that this had been the thought upon his mind for years past, that indeed every interval of leisure during his life had been employed either in the preparation for, or the actual translation of the Scriptures into English, and for the last 10 years it had been the main object of his life. "See", said he, pointing to a table in his quiet study, covered with manuscripts, commentaries, dictionaries, every thing in short, helpful for this work:

> *"It is there that I sit, not only by day, but often far into the night. Just a few lines only will sometimes cost me hours, and days of study before I can satisfy myself as to the correct rendering, but by God's help, I hope never to relinquish my task until I have succeeded in giving the people the whole of the Scriptures in their own tongue."*

To have the whole of that precious book, in a language understood by the common people, lit up a hope in their hearts of the dawn of brighter days. To know that the Bible could be obtained, would induce many more to learn to read, and in this way they hoped the Good News might pass from one to another." - in "Long Evenings And Work to Do in Them", 1874.

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In Gratitude To

This Book is dedicated to the following:

To the God of Abraham "I AM that I AM": Who Is The God of Humankind, Our One and Only Lord and Saviour The Christ. We Dedicate this Book: To All Those Who Have Perished at the hands of ignorant men of The Medical Trade; To all those Wise Men who understood the difference between what is Right and what is Wrong; To those Wise Ones, Who Are Ever Present, And Let Not Civilization Fall.

> ***“For the Next Coming of Christ; there is a Band of People who, to welcome Him, should be able to Transcend their Physical Natures, and Realise their Spirituality.”*** *- Dr Edward Bach, MD, in “Writings”, 1933.*

> ***“Prepare ye the way of the Lord.”*** *- Isaiah 40:3*

Where Does Wisdom Come From

Know Who Is the Author of thy Wisdom. In Whom have ye believed? For he that would be the greatest must be the servant of all. First must the body find itself, and make its relations correct with the Creator. First must he Learn that: The Beginning of Wisdom; Is The Understanding And Knowledge of the Father.

For As one uses that one knows, the awareness of its source, of its ability, of its end, is more and more a part of the soul. For to do good is to be absent from that which will cause, Ever or at any time, confusion in self or in others.

> ***“Raise your gaze, have faith, and you will know, that Wisdom is not acquired through clandestine investigations, as man does with man. It Is Acquired by Conversing With God.”*** *- Benjamín Solari Parravicini*

The Dimensions and Facets of Reality

“The world that is perceptible to our senses, and the world of our concepts and beliefs is certainly a part of reality. But the separation it is so tiny as to barely be a blip on the screen. Unless what is called the real world, is placed in the proper context and perspective, it is no more than a dream.

A Dream: Spiritual Experiences help us to loosen our grip on the materialistic view of reality as the dominant one. They help us to soften and expand the boundaries of who we think we are.

We must each find the Connection with Reality through our Own Investigation of Self, Mind, and Reality: The Physical, Mental, and Spiritual.

1. Consciousness is the First Cause of the Universal Manifestation, a Creative Vibration whose echo is the manifest cosmos. Life itself is the Creative Force or God, yet its manifestations in man are Electrical, or Vibratory.

2. This Creative Consciousness Is The Animating Life Force Of All Living Creatures, it Permeates Every Atom of the Entire Cosmos. Realising this, our fundamental experience of life shifts from Dualistic to Unitive, from doing to non-doing, from becoming to being.

3. We are, in our essence, overflowing with presence, intuition and joy; Overflowing with presence, intuition, and joy is who we are.

4. Everything Is Sentient (has the ability to experience feelings and sensations), all things are alive and conscious, regardless of how inanimate they seem to our gross eye. Everything is a vibration of the primal consciousness, apparent differences being differences of frequency.

5. All Living Things Are Related. If you touch Here; you touch There. This is the root of the maxim: “What Goes Around, Comes Around.” The categorical distinctions we use to separate ourselves from others and the world are hallucinations, which prevent us from seeing that we are the world, and the world is us.

6. The individual self does not exist. It’s not that we don’t exist; we just don’t exist as independent of everything else, and we don’t exist solely within the package of our body/mind. On the one hand, we feel that we are the story, and history of our body/mind; on the other hand, we have all experienced how love, beauty, and joy exist only when we transcend that story. Our individuality is a barrier to the deepest and truest experience of being alive, in which we lose and forget ourselves.

7. We Live In Multiple Dimensions: And have access to powers, capabilities, and knowledge beyond the range of motion of our body, senses, and mind. The Human mind, can directly access the entire database of consciousness, and demonstrate massive intuition, clairvoyance, precognition, energetic healing, bilocation.

8. Every Thought and Action: Is a potent seed which bursts into the world, sooner or later. We cannot easily sort out the intricate and complex web of cause and consequence, seed and flower. Nonetheless, every rooster comes home to roost. If we kill, we should expect to be killed. If we degrade, pollute, and spoil, we should expect that, look for that. If we deprive others, we will soon be deprived. If we show kindness and generosity to others, watch it return. We live on a wheel and we turn that wheel with our thoughts and actions.

9. Life Is Eternal, the manifestations of life are impermanent: Everything exists in its own cycle of birth, growth, decay, and death. Everything, from a thought to a mayfly to a galaxy. With the subtle eye, we see that there is no solidity at all, there is only an incredible festival of energy. Solidity and duration are conventions of our perceptual faculties. Now is the truest expression of Reality.

10. Attachment Is Suffering: Let everything go as quickly as it comes. All of our ideas, identities, thoughts, opinions, grudges, unresolved expressions, motives, wounds, angers, fears, hopes, dreams, loyalties; create the individual self, which is the barrier to experiencing the essential sell.

11. The ideas of original sin are fear and shame. And may be defined in one word: Disobedience.

12. Thoughts and Awareness: Are distinct forms of Perception. Thinking is a limited form of perception and cannot experience reality directly. Awareness is without inherent limitation; awareness is the experience of reality.

13. The Mystical Experience is a wild sea in which wave upon wave of depth and significance crash over us; layers, facets, and dimensions of the great mystery open and befriend us.

The mysticism I know is simple: it is the Silence that Falls Upon Us, in a Moment of Beauty, of Creation, of Love, of Communion, of Deep Reflection." - in "Invisible Leadership: Igniting the Soul at Work", 1998.

> ***"The Punishment of Every Disordered Mind Is Its Own Disorder. The Mind Commands the Body, and is instantly obeyed. The Mind Commands Itself, And Meets Resistance."*** *- Augustine of Hippo, in "Confessions", AD 397.*

What Is Truth?
And Why Does It Matter?

> ***"Is Truth not the basis, On Which We Judge Reality. Coexist Peacefully, Justly! Power of the Minority, Over a Majority with a Foundation Based on Lies, will lead to ruin. Healing and Unity cannot be achieved when this is the case, only division the people. In Establishment Media, the tool most often used to manipulate, and control the public, the most insidious tool, is not the outright lies they pedal, it is the lying by omission that is most effective. It is the mechanism that chains the minds of people. It is Plato's Cave manifested, and those who escape these bonds, have a mountainous task in revealing the truth to those who still remain in that cave."*** *- in "What Remains: Exposing the Kamloops Mass Grave Deception's Impact on Powell River", 7 May 2025.*

The Truth: The Essential, and Highest Value of Mankind

> ***"From the Whole Deduction Which Has Now Been Made, it appears that superstition is useless; that Truth and Reason, are alone to be depended on in giving a regular and safe determination to human actions; and that the Idea of Managing Mankind by Means of Prejudices, and by Arts of Deception Is False Philosophy, as Unwise, as It Is Immoral."*** *- Dr Thomas Hardy, in "The progress of the Christian religion", Society in Scotland for Propagating Christian Knowledge, 30 May 1793.*

The Pursuit of Truth

> ***"The Pursuit of Truth, hath been my only care, ever since I first understood the meaning of the word. For this I have forsaken all hopes, all friends, all desires, which might bias me, and hinder me from driving right at what I aimed. For this I have spent my money, my means, my youth, my age, and all I have, that I might remove from myself that censure of Tertullian: "Suo vitio quis quid ignorat" (Who is ignorant is his own fault). If with all this cost and pains, my purchase is but error, I may safely say, to err has cost me more than it has many to find the truth: and truth itself shall give me this testimony at last, that if I have missed of her, it is not my fault, but my misfortune."*** *- John Hales, in his letter to Archbishop Laud, 1721.*

> ***"So [Easy To Understand] Are All Truths, when once they are found out, but the Difficulty Lyeth In Finding Them."*** *- Galileo Galilei, in "Dialogue Concerning the Two Chief World Systems", 1632.*

"In the first place, circumstances have occurred which have greatly raised in importance the consequences of inquiry, and of course the consequences of the conduct exhibited in prosecuting it.

So long as Science and Civilisation had no existence, as mankind were solely occupied with providing for their physical wants, or were continually engaged in the rougher work of mutual depredation and hostility, **the cultivation of knowledge as a separate sphere of exertion, and indeed any semblance of regular investigation even in practical concerns, would be almost unknown, and consequently the virtues and vices connected with the pursuit of truth, would not be called forth.**

Gradually, however, as civilisation advanced, as the interests of society growing more complicated required more careful discrimination, as wealth and the exemption from occupation accompanying wealth became diffused, and curiosity was at leisure **to speculate on the nature and destiny of man, and other beings, to investigate surrounding objects, and to scrutinise passing events, it became manifest that the results of this mental activity would have important bearings on the fortunes of mankind.**

What we term inquiry must always have place, and possess importance in a certain degree, inasmuch as it is mixed up with ordinary conduct; but it is not so immediately apparent that, when pushed beyond the point of direct applicability, it has an extensive influence on human affairs.

In the second place, concurrently with this change produced by the growing importance of the pursuit of truth, and of all conduct connected with it, the moral sentiments of mankind on the subject have also undergone progressive alteration from a more and more accurate appreciation of the tendencies of human actions, and a nicer discrimination of complicated moral phenomena.

A retrospect of the three last centuries alone, leads us to anticipate that any improvement in the discrimination of good and evil in the various paths of human life must eventually find its way from the meditative few to the less reflecting many. Amongst these few, in the present day, the fundamental principles, without which a code of morality in reference to the pursuit of truth cannot exist, are universally held.

Philosophers unite in **regarding Truth as inseparably allied with human happiness, and error as essentially hostile to it.**

Duties of the Inquirer in relation to the State of his own Mind, No one who has been accustomed to discriminate the phenomena of the world within him can doubt hat **there are certain states of mind favourable to success in the pursuit of truth, while there are others of an opposite character.**

Duties Towards Others in Relation to the Pursuit of Truth

While it is our duty to enter upon the investigation of certain subjects, and conduct the inquiry with diligence and impartiality, we may be called upon by various circumstances to exercise an influence over our fellow-men who lie under the same obligations, or who have voluntarily undertaken the pursuit of truth in some department of knowledge. There appear to be 2 principal methods in which this may be rightly done. The first is by advising and encouraging others to undertake and prosecute inquiry in the proper spirit and manner, and manifesting our sentiments of their conduct in these respects; the second is by communicating to them the information we possess, the facts and inferences which have presented themselves to our own minds, and thus helping them to their ultimate object; the attainment of truth.

The 1st may be briefly designated as Moral Influence;

The 2nd as Intellectual Assistance: the one supplying motives to search for truth, the other means for succeeding in the pursuit.

The 2nd way of influencing others in the pursuit of truth is by the communication of knowledge; by instruction.

It must frequently happen that a man who has satisfied his own mind on some particular subject, shall be imperatively called upon to assist others whose duty it is to make a similar investigation, by imparting such information as he has himself acquired respecting it.

Above all, he would be encouraged in the pursuit of truth by the prospect that his efforts would be of service; that any communication he might make to his fellow creatures in a right spirit could do them no harm, and might confer lasting benefit. The state of society at present on this great subject, it is not too harsh to say, is a state of barbarism.

Whoever looks abroad must admit, that in the most enlightened countries existing in the world, gross ignorance of the duties of man to God, and of man to man, in relation to the pursuit of truth, abounds.” - in **“Essays on the Pursuit of Truth and on the Progress of Knowledge”**, 1844.

The Cure of Disease

> ***"The Health of the People Is Really The Foundation upon which all their Happiness and all their Powers as a State Depend."*** *- Benjamin Disraeli, British Prime Minister, in Speech, 24 July 1877.*

"To Advocate a Purely Hygienic System of Cure, or the Simple Practical Application of the Vital Truths of Physiology; to the end that the Restorative Energies of the Organism May Be placed in the Best Condition, and have the fullest scope, for their own development, thus Converting Diseased Into Healthy Action.

It Being Clearly Established that The Natural Tendency of the Body Is To Rectify Its Own Deviations, when placed in the best circumstances for so doing.

Such was the Natural Common-Sense-Like, and Effective Agency with which the illustrious Sydenham Combated the Disease.

By Such Means the Justly Celebrated Currie was Cured in his own person, When Deemed Incurable By The Ordinary Practice.

By This Agency Dr Combe long bade defiance to the ravages of consumption.

Such in Effect Was the Plan Relied on by the fathers of ancient physic, by Hippocrates, by Celsus and Aretæus; and, in comparatively modern times, by Salvadori in Italy; by his contemporary Gilchrist in Edinburgh; by Portal in Paris; and by Dr Stewart of Erskine; All The Most Successful Curers of Consumption (Tuberculosis) in Their Own Times.

The Water Cure of the present day, in honest and scientific hands, and freed of all adventitious and ad captandum accessories, is this strictly Hygienic or Physiologic System of Treatment.

The time has fortunately passed away for it to seek the false aid of puff or advertisement, or to require the doubtful advocacy of "confessions" and "testimonials."

It is now as much above the need of exaggeration as it is beyond the reach of detraction. Standing on its own naked merits, it can afford to dispense with glowing pictures of its "safety and efficacy", or of the marvellous doings of "establishments in full operation."

It requires no paid writers to defend its cause; its own best practitioners holding rank, in point of education and accomplishment, with the first men in the profession, and being quite competent to fight their own battle.

The Duty a Man Owes to Himself, when he assumes the function of a Teacher of Truth that concerns the general well-being of others, is to be grave, earnest and truthful; to appeal only to the sober thought of the thinking community, and to deliver himself of the true convictions of his mind, no matter what prejudices they offend what practices they contradict, what interests they thwart.

In conclusion, the writer has aimed at giving a perspicuous, comprehensive, and practical exposition of the Nature, Causes, Prevention, and Cure.

Having a deep conviction of the justness of the views propounded, and of the superiority of the practice inculcated, the author has urged their claims with a corresponding earnestness.

If the Practice Be Faulty, It May Be Corrected; but if Both Be Found Based On Truth, that Many May Co-Operate In Applying Them For The Benefit of Suffering Humanity Everywhere." - Dr John Balbirnie, MD, in "The Water-Cure in Consumption and Scrofula; an Exposition of the Question of Their Curability", 1854.

> ***"Peter said that: There Are No Diseases; But Only Patients. This Is True.***
> ***Ottomar Rosenbach wrote:***
>
> ***"We Wish Not To Classify; But To Cure"."*** *- in "The Nominalistic Conception of Nosographical Entities "Diseases"," Proceedings of the Royal Society of Medicine, 1938.*

> ***"All Scientific work is liable to be upset, or modified by advancing knowledge.***
> ***That does not confer on us a freedom to ignore the Knowledge We Already Have, or Postpone the Action that it appears to demand at a given time."*** *- Sir Austin Bradford Hill, in "The Environment and Disease: Association or Causation", Proceedings of the Royal Society of Medicine, 1965.*

Emunctology Reference Manual

> ***"As A Clinical Guide, It Is Written for the Benefit of the Practising Clinician In Order To Satisfy 2 needs:***
>
> ***1. That of the Clinician for a Deeper Approach to Healing.***
> ***2. That of the Seeker for a Deeper Experience of Healing."*** *- in "The Theory of Endobiogeny", 2019.*

The Study of the Extraordinary Function of the Human Body

"Research on the Extraordinary Function of the Human Body Are of Great Importance; both Theoretical and Practical.

We Firmly Believe that: There Is Nothing that Cannot Be Understood in the world; There Are Only Things that Have Not Yet Been Understood.

We are full of confidence, as to the prospect of: The Study of the Extraordinary Function of the Human Body." - in "Study of the Extraordinary Function of the Human Body", Space Medico-Engineering Institute [China Astronaut Research and Training Center], 1983.

Then, these notions, these selection of words, of phrases, are here given to present a Truth, not the illusion of truth, but the Truth which is Eternal. To know the Truth is to make you free. For he that findeth the Truth is free indeed. Truth is as Life, a Growing consciousness in self. All which is here included in this Book, was selected, to be an aid to the material mind, To Understand the Natural Unseen Forces, Which Command All That Is Living.

> ***"Man, His Body Is a Playground of Many Forces Still Unknown, Though Nevertheless Very Real."*** *- Dr Maryla de Chrapowicki, D.Psy, in "Biotonic Therapy;* ***The therapeutic use of Life Energy, and the Effect of Light and Colour Vibrations on Life****", 1952.*

It Is Impossible for the Material Mind to Comprehend the Spiritual Realm, for there is both lack of words, of vocabulary to express something which is Unseen. Al-dough felt, and sometimes even Sensed or Perceived, but Not Quite Understood. There is much wisdom in this pages, for this Book, like all the Books of the Order, where written to be of Help, to Aid the Seeking Humankind. And to fulfil that promise by Him:

> ***"Seek, and ye shall find; knock, and it shall be opened unto you."*** *- Matthew 7:7*

Thus, Emunctology is that which is helpful, and pertains to the welfare of Both the Souls, and Bodies of individuals. Let the Ideal of the Christ Guide thee. For He hath given His promise:

> ***"Take my yoke upon you, and Learn of me."*** *- Matthew 11:29*

In This Knowledge of Him, thy Saviour, as thy companion, the way becomes easy, the burden becomes light. For as He hath given, take not thought or fret thyself not concerning tomorrow, looking not back but ever upward, onward, into the face, into the love of the Christ. And ye will find His presence giving thee strength for the daily conditions, the daily disturbances. And He will keep thee as in the hollow of His hand. For as He hath given, He hath given His angels charge concerning thee, but the Christ has given: "I, even I, will be With thee." Then trust in Him, for this is indeed Knowledge.

> ***"And chiefly thou, O Spirit, that dost prefer Before all temples th' upright heart and pure, Instruct me, for thou knowest; thou from the first Wast present, and, with mighty wings outspread, Dove-like satest brooding on the vast Abyss, And madest it pregnant; what in me is dark Illumine, what is low raise and support. That, to the height of this great argument, I may assert Eternal Providence, And justify the ways of God to men."*** *- John Milton, in "Paradise Lost", 1667.*

The Sum of Knowledge Concerning the Laws of Health

> ***"This Book is one which should make a strong appeal to the younger practitioners, whose medical scholastic training of 4 years supplemented by 2 years at least of interneship, Has Lacked A Coherent, individualized course in the all-important, everyday, Rational Work of Taking Good Care of their Bodies, And Preserving Their Health. Each chapter has a sort of "Golden Text", or so-called "Law" of Health as a beginning. The Chapters have the same Law as a Text. The concluding chapter, instead of illustrating any special Law has for a Motto:***
>
> ***"Do Unto Others As Ye Would That They Should Do Unto You."*** *- Matthew 7:12*
>
> ***Which is applicable enough for its subject, Eugenics. No new theories, facts or opinions are given But: The Sum of Knowledge Concerning the Laws of Health, and How to Keep Well Are Presented, In Clear, Unmistakable Language, In An Attractive And Convincing Manner. The Book Is Sure To Make Friends For Itself."*** *- in "New England Journal of Medicine", 29 August 1935.*
>
> ***"As Spiritual Healers We See Visions of Truth that mere materialism cannot see; we use remedies, too, that others cannot use; but we miss one inexorable truth; the spirit of man is subject to the law of substance in this life; Spirit and Body Are Inter-Dependent, Vibrant, One To The Other, Until The End. As Mental Healers we have discovered One Great Truth: Ideas Profoundly Influence The Body's Health. As physicians, too, we often see the body empty, without a spirit, even without a mind; mere chemist, physicist, hand-worker; we see mere physical realities and ignore all others; dismiss them into the region of the unreal and the impractical. But surely, in the coming years; A Race of Healers Will Arise To Wonder At Us; Whole Men, Integral Men, Men of Healing Integrity; Men Able to See All That Is To Be Seen; All the Mystery and all the Promise of Unknown Truth; all the Secrets of the Spirit of Man, and All the Marvels of Mere Matter."*** *- Dr Herbert Carleton Sawyer, MD in "The Matter with Nervousness, 1909.*

Emunctology Is Based Upon the Clinical Evidence of Facts; obtained from the direct Clinical Experience of All Practitioners here mentioned, giving thus, their Testimony, and sharing their Clinical Observations. Together with the Book "Emunctology", this unselfishly written Book; whose scope and utility, is so nearly commensurate with the too apparent present needs of Humanity. Was written to be: Sound, Sensible & Practical; a perusal of this Book, thorough the Application of its Principles; will place Health & Hope, in the Hearts of Millions of Lives.

The Emunctology Teachings, Best Given by Illustrations, to Enforce the Truths for the Great Ameliorating Influence of Health

“Playfair's position in the world of science can, in the nature of things, only be determined when sufficient time has been allowed to elapse to bring him, and his contemporaries in scientific work into their true focus.

Throughout his career his **chief object seemed to be to bring all the stores of knowledge which he had at his command, all the teachings of experience, to the service of his fellow-men.** The reader will obtain the best idea of the extent of Playfair's knowledge, and of the peculiar place which he occupied in the world of science, from the book “Subjects of Social Welfare”, 1889.

The subjects dealt with are various, ranging from the Public Health, and the Phenomena of Sleep, to Bimetallism, and the Relations of the Universities to Professional Education. Playfair's labours as a man of science; and the tribute which he pays to the part that Playfair had in **bringing science and statesmanship, science and industry, into close and practical alliance, will be endorsed by all men of science and all practical workers.**

Playfair's mode of work, furnishes a model for all engaged in similar inquiries. It occupied many years of Playfair's life; all the time he could spare from his regular avocations being devoted to it. Sir Edward Frankland, declares that for **plan of procedure, scientific accuracy, and thoroughness of execution,** Playfair's reports on **this investigation will bear favourable comparison** with any ever presented to Parliament by command of Her Majesty.

He never forgot his first love; and whenever he had the opportunity, he strove to impress upon those with whom he was brought in contact the virtues of science as a great ameliorating influence of life, and its uses in the development of the resources of a people, and in the removal of the evils to which society is a prey. His style, both in speaking and in writing, was at once delightfully simple and delightfully picturesque.

The illustrations by which he sought to enforce the truths he was teaching were drawn from the commonest objects, and were made effective by the ingenuity with which they were applied to the subject in hand.

In turning over the pages of “Subjects of Social Welfare”, I find many passages illustrating his peculiar method in dealing with abstruse questions, and the remarkable ability with which he was able to make complex problems intelligible to the ordinary mind.

I find also in the book some of those master-strokes which made Playfair one of the great practical teachers and pioneers of our time.

Other men dug more deeply into the soil in search of abstract truth, but he had at least a wonderful knack of laying his hands upon the nuggets in the mine in which others wrought, and of bringing them to the light of day.” - in “Memoirs and Correspondence of Lyon Playfair, first lord Playfair of St. Andrews”, 1899.

"One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient. Disease in man is never exactly the same as disease in an experimental animal, for in man the disease at once affects and is affected by what we call the emotional life. Thus, the physician who attempts to take care of a patient while he neglects this factor is as unscientific as the investigator who neglects to control all the conditions that may affect his experiment." *- Dr Frances Peabody, MD, in "The Care of the Patient", to students at the Harvard Medical School, 21 October 1926.*

To Lay The Foundation For Those Who Are To Come And Point The Way

"I work for the future; Build for the future. Just as today I see the realization of experiments carried on 50 years ago, I am working with a view toward still greater achievements which will come to pass a half century hence. That is my method. After experiencing a desire to invent a certain thing, I go on for days, months, even years with the idea in the back of my head. Whenever I feel like it, I play around with the problem without giving it any deliberate consideration. This is the incubation period: Next comes the stage of direct effort. At this point the solution is somewhere in my Subconscious Mind, although it may take some time before it reaches e Level of Consciousness. As my Conceived Device begins to take form, I make mental changes in the construction, improvements are figured out, and I even operate it. All of this is preliminary work all in my Mind. When the machine itself is finished, I slip my imaginary job over it and find they coincide to the minutest detail. My paramount desire today, which guides me in everything I do, is an ambition to Harness the Forces of Nature for the Service of Mankind. As I see it, we are on the Threshold of a Gigantic Revolution based on the commercialization of the wireless transmission of power. The principles for this have been discovered by me. As this Wireless Energy is converted into a commodity for the use of the masses, transport and transmission will be subjected to tremendous changes. Motion pictures will be flashed across limitless spaces by my system. The same energy will drive airplanes and dirigibles from one central base. In this New Era man will be able to travel safely, and at great speed, to any part of the world; the jungle; the arctic; the desert; mountain tops; over oceans. The instruments by which these wonders will be achieved will be amazingly simple. These things will come to pass. The scientific man does not aim at an immediate result. He does not expect that his advanced ideas will be readily taken up. His work is like that of the planter: For the future. His Duty is to Lay the Foundation for Those Who Are To Come, and Point The Way. He lives and labours and hopes." - Nikola Tesla, in "Modern Mechanix and Inventions", July 1934.

Truth Matters

"Then the band and the captain and officers of the Jews took Jesus, and bound him." - John 18:12 **"He sought to win men by His life of love; but vainly. And so He offered no hindrance, when the hour was come,** because this was that for which He had come, after love in life, through love in death, to conquer. **He offered His own hands for the binding; the hands that for 3 weary years had been stretched out to a disobedient and gainsaying people.** Like the mighty Judge of Israel, He could without effort have snapped the cords that held Him. He would not. **These His enemies, in their ignorant vanity, thinking themselves the victors, were but fulfilling His blessed will, and forwarding His design of ransoming a sin: Accursed World. They who, led by a thief, and soon to choose a thief, had come out against a Saviour, as against a thief, to take Him, were ignorantly the ministers of His, to do His service, binding the sacrifice with cords, by whose death the world was to have life.** His non-resistance had for its motive this very fact; His will was in process of accomplishment. **And this truth, suggests another intimately related to it, and readily gathered from the binding of Christ by His enemies: The Permitted Triumph of Evil Is Temporary. It is the Spirit of the cross that we need. Out of the possession and exercise of that Spirit will issue results in blessing richer than we have power to imagine. What happens to me matters little; but What Happens To The Truth Matters Much."** - in "The Bound Christ Triumphant", The Homiletic Review, August 1885.

Nature Is Our Friend: Not Our Enemy

"All things in nature have a shape, that is to say, a form, an outward semblance, that tells us what they are, that distinguishes them from ourselves and from each other. Unfailingly in nature these shapes express the inner life, the native quality, of the animal, tree, bird, fish, that they present to us; they are so characteristic, so recognizable, that we say, simply, it is "natural" it should be so. Yet the moment we peer beneath this surface of things, the moment we look through the tranquil reflection of ourselves and the clouds above us, down into the clear, fluent, unfathomable depths of nature, how startling is the silence of it, how amazing the flow of life, how absorbing the mystery! Unceasingly the essence of things is taking shape in the matter of things, and this unspeakable process we call birth and growth. Awhile the spirit and the matter fade away together, and it is this that we call decadence, death. These two happenings seem joined and interdependent, blended into one like a bubble and its iridescence, and they seem borne along upon a slowly moving air. This air is wonderful past all understanding. Yet to the steadfast eye of one standing upon the shore of things, looking chiefly and most lovingly upon that side on which the sun shines and that we feel joyously to be life, the heart is ever gladdened by the beauty, the exquisite spontaneity, with which life seeks and takes on its forms in an accord perfectly responsive to its needs. It seems ever as though the life and the form were absolutely one and inseparable, so adequate is the sense

of fulfilment. Whether it be the sweeping eagle in his flight, or the open apple-blossom, the toiling work-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun, form ever follows function, and this is the law. Where function does not change, form does not change. The granite rocks, the ever-brooding hills, remain for ages; the lightning lives, comes into shape, and dies, in a twinkling. It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognisable in its expression, that form ever follows function. This is the law. Shall we, then, daily violate this law in our art? Are we so decadent, so imbecile, so utterly weak of eyesight, that we cannot perceive this truth so simple, so very simple? Is it indeed a truth so transparent that we see through it but do not see it? Is it really, then, a very marvellous thing, or is it rather so commonplace, so everyday, so near a thing to us, that we cannot perceive that the shape, form, outward expression, design, or whatever we may choose, of the tall office building should in the very nature of things follow the functions of the building, and that where the function does not change, the form is not to change? We know, and feel that: Nature Is Our Friend, not our implacable enemy." - Louis H. Sullivan, in "The Tall Office Building Artistically Considered", Lippincott's Magazine, March 1896.

"The Lord He is God"

Has in the Oneness of the Living God the Christ Our Lord and Saviours, so it is in the oneness of comprehension and understanding in which those points of truth these Authors all conclude and agree upon. And as a result on which they all agree, that point of agreement, that truth universal truth, that this book finds its essence and it is thus produced and given as a testimony that:

"The Lord He Is God", and the Lord walks with us everyday, even if you do not see Him, He Is with us, He Is with those who ask for Him for The Lord Is God of All Humankind. These are not vain words, but are those words from those who know The Lord, His Ways, His Coming. And many others whose names do not appear here but they know who they are.

> ***"And Asa in the thirty and ninth year of his reign was diseased in his feet, until his disease was exceeding great; yet in his disease he sought not to the Lord, but to the physicians."*** *- 2 Chronicles 16:12*

For these writers, spoke not in vain, but in Truth. The Lord in His mercy sought fit to that these Truths; be not forgotten; but be of true benefit for he who seeks. To all physicians, whose convictions regarding the soundness of principles set forth in this work, and whose fearless advocacy of therapy based upon these same principles; have been a constant source of encouragement and inspiration to many, this book is also dedicated.

Acknowledgements

The collective knowledge, generated from academic research summarized in various references has been critical in the creation of this published work, which is best viewed as a comprehensive compilation and collection of published information by Many Authors throughout the ages, as well as personal and clinical experience in the treatment of self and others.

> ***"True research is the careful elimination of untruths, and the amalgamation of truths. Valuable accomplishments are thus made by the concerted efforts of many."*** *- in "The Southern Surgeon", August 1937.*

This work was possible only by the guidance and Light of Christ who Is God. A special thanks also to those who work with Him and help all of us. May each individual be able, to find this eternal truth, while on earth.

Credits and References

Although all credits and references where given to the best of our knowledge and information contained in the central archives of the Hospitallers Order of the Good News. If there is any errors or mistakes we kindly ask the reader to allow the knowledge of such items in order to rectify same in future editions of the present Book.

Health and Therapeutic Journals and Books

The present work rests upon the foundations of those civilization luminaries, men and woman of exceptional talent, intuition, and detailed observation. Furthermore it was a privilege to us, for them to have the dedication and time to write and publish their clinical findings. There is then a vast amount of Journals and Books devoted to the Health and Therapeutics. **Of These Printed Records those from 1850 to 1950 in this one hundred year period we specially encounter that The Majority of what is to be known concerning disease its origin and its Treatment and Cure, where in fact Correctly Identified. These records, in their collective, contain timeless observations of which many remain Permanent Truths. These pearls are hidden from plain sight, only the Adept or the Initiated can identify them and pick one by one, from the surrounding confusion. This was the work done, are the result of same are the books published by the Order.**

Sources

This book is a Record of the clinical findings of many great Health Practitioners, their findings remain the same throughout the centuries. All share the same conclusion. The Truth is in plain site. Apart from the Archives of the Hospitallers Order of the Good News Library, we are also very grateful to all libraries, who have kept books for the last 200 years, those of which by their keeping allowed the information on those books to survive, and be upon their withdrawn from their keeping available to purchase by the Order, and kept in its Archives and Library. The Hospitallers Order of the Good News, has therefore obtained many of this rare Books, many of which are not available, nor found in the libraries, for this we thank The Lord who Is God, for having placed the same in keeping of the Order.

Errors & Omissions

Although the editor, publisher have made every effort to ensure that the information in this book was correct at press time, the editor, publisher do not assume and hereby disclaim any liability to any party, for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause. Much care was taken to avoid any errors or omissions, if any do exist, please let us know, in order to correct same in any future editions.

Dedication

"To the victims, past and present, rich and poor, of Adulterated Food, Patent Medicines, Compulsory Vaccination, Abuse of Surgery, booze-guzzling, industrial diseases, autocracy of dress, false modesty, sex ignorance, and conventional hypocrisy; to those, who never had a real opportunity to learn the truth, being kept in ignorance through the vicarious and popular channels of misinformation. To those, whose nerves, muscles, bones, marrow, and blood have been converted into dollars and cents under, the iron heel of commercial greed, in the name of health, science, and benevolence; to those, whose inner and better selves remain crushed and stifled as a result of monotonous, loveless lives, tyrannical and fanatic parents, and uninspiring surroundings in general; to the patient "sons of toil," who constantly undermine their health and risk their lives, making it possible for us to appreciate art, music, literature, culture, and invention that the genius of human brain has brought forth, yet have for themselves little in return, save fatigue, malnutrition, soul-starvation, anxiety, fear, filth and premature death. To all these victims of our seething, restless, debauching, artificial, and health-wrecking era, impudently labelled "civilized". I affectionately and hopefully dedicate this book." - Dr Simon Louis Katzoff, MD, in "Timely Truths on Human Health", 1921.

"The present work is written for the double purpose of correcting error, and imparting truth. *Its purpose is not to attack men, nor systems, but simply to state facts by which their pretensions may be judged." - Dr Frederick Hollick, MD, in "Neuropathy, or The true principles of the art of healing the sick" 1847.*

Disclaimer

"The content of this Book is based on research conducted by the Members of the Hospitallers Order of the Good News, unless otherwise noted. The information is presented for educational purposes only and is not intended to diagnose or prescribe for any so-called "medical" or "psychological" "condition", nor to prevent, treat, mitigate or cure such "conditions".

The information contained herein is not intended to replace a one-on-one relationship with a qualified healthcare professional. Any advise for Healthcare should be sought upon those **OUTSIDE** of The Medical Trade, for **Medical Trade advise is totally different from Health Advise, for Health and Medicine are two different and totally opposite things. As for the "Science" of Medicine this so-called "Science" is aimed, mainly and foremost, at selling Poisonous Synthetic Pharmaceutical Products, maintaining the client under Medical Trade "treatment" and prescription from cradle to grave (from birth to death), and once the Nefast consequences of the actions of these Pharmaceutical Poisonous Synthetic Compounds effect a direct damage upon all organs of the body system, the Medical Trade then sells Surgeries, in order to remove the dead organ parts damaged by Medical Trade Pharmaceuticals. After studying the Medical Trade, we can only conclude: That one of the great wonders of the imagination of the Medical Trade; is that it is capable of Conceiving Every Form of Fallacy Directly Opposed to the Truth.** Emunctology is not "Medical Trade" advice (Emunctology is that directly opossed to the Medical Trade, that is the TRUTH, not Medical Trade Error; but the TRUTH, and only the TRUTH is accepted in Emunctology. For: Errors, Lies, Fallacies Has No Place in Emunctology. Emunctology does not seek to Force Nor Coerce Poisonous Vaccines nor Pharmaceutical so-called medications), Emunctology is the sharing of knowledge and information, **based on Practical Clinical Research and Experience.** The Hospitallers Order of the Good News encourages the reader to make your own Health Care decisions based on your judgement and research in partnership with a qualified Health Care Professional. These statements have not been evaluated by the both **Useless And Corrupt Food and Drug Administration**, in the USA. The information on this Book is not intended to diagnose, treat, cure, or prevent any disease."

> ***"In My Writing, As Much As I Could, I Tried To; Find The Good And Praise It." -*** *Alexander Palmer Haley*

> ***"The Physician knows that most something about Diseases, but nothing about Health.*** *If only because the latter is a scarce commodity throughout his life.* ***The Physician has no contact with normal healthy people, hence the frightening statistics about the amount of protein we need daily, invented by the brilliant Justus von Liebig, who experimented on a large number of German students, with huge beer bellies, miserable engines which needed 3 times as much fuel because of this dose of proteins determined from inept samples. For more than 30 years, it was administered for more than 30 years protein poisons, were administered throughout Europe to completely normal people, especially children thus spreading Acute Appendicitis, Gout, and other Metabolic Diseases. He who recognizes an evil is already half cured."*** *- Prentice Mulford, in the original manuscript of "Thoughts Are Things", 1889.*

> ***"There is no unity of thought, no congruity of conclusions, no agreement as to the proper means to be employed,*** *although there is, as far as outward appearances are concerned, an approximate* ***Oneness of Purpose."*** *- in "A Treatise on Medical Practice", 1916.*

As sad it may be, that one is forced to place such a disclaimer, just serves to illustrate the state where the present Civilization is at the moment. **A Civilization Founded On Lies Has No Future: A Civilization Based On False or Fake Pretences Has No Future; A Civilization That Follows Political Correctness Is Fake By Proxy. To sustain the present Civilization is to sustain a lie.**

Thus the solution is to establish a New Civilization, this if Humankind will ever have a chance to develop on Earth. The Study of the Emunctory System doesn't attract major research efforts, and it is all but abandoned to a profound neglect, by the Medical Trade. **The purpose of this book, is to create in one single volume, a collection of written experiences from physiologists, clinicians, physicians, surgeons, and radiologists who have spent most of their lives studying subjects that relate to the Emunctory System.**

Every text in this book was chosen for a reason, every idea and teaching that it conveys, has been found to be in truth, not in error, but in Truth, and many times this individuals where at odd with the Medical Trade, matters not what other say; **Our Trust is always in Christ, for He Is God.**

> ***"The Sufficiently Realized by Those in Authority. National Health Insurance Act 1928, practically speaking, Makes Provision for No Treatment Other Than by Drugs. Physiotherapists are often paternally warned that they must not claim that their specialities alone can effect cures in many different forms of disease. We therefore feel justified in asking the Insurance Act authorities whether their speciality, i.e., Drugs, is such a sovereign specific, that Every Other Method of Treatment May be Neglected. Put in this form, the question admits of only one answer. Yet it is a Plain Fact that Drug Treatment is practically the only form with which the Insurance Act concerns itself. How long is the present Human and Economic Wastage to continue before the Act is extended, to make provision for The Forms of Treatment Which All the Leading Authorities Recognize To Be The Only Satisfactory Means of Combating Rheumatic Affections, in other words: Treatment by Electrotherapy, Hydrotherapy, and other Physical Measures?"*** *- in "Insurance Act Reform", British Journal of Actinotherapy and Physiotherapy, September 1929.*

Is not the body composed 75% of Water? Is not the Spirit; that vivifies the Soul Electrical? The Spirit and Mind may build the flesh to beauty, to Health, even when racked with pain. And what be the Elements? Fire and Water! Thus Hydrotherapy, and Electrotherapy are those channels through which man should approach his Help to his Fellow Men.

“I ask the reader not to consider this little work in terms of the work itself, but in terms of the subject it deals with, a subject that is destined to render the greatest service to suffering humanity, as evidenced by the conduct of the most renowned physicians of all countries, who prescribe Hydrotherapy Treatment to their patients deemed incurable, as the Treatment that Offers them The Best Chance of a Speedy Recovery.” *- Dr H. Guérin, MD, in “Merveilleux effets de l'eau froide dans le traitement des maladies ou de l'Hydrothérapie”, 1863.*

“The main reason for the failure of modern medical science is that it is dealing with Results and not Causes. For many centuries the real nature of disease has been masked by materialism, and thus disease itself has been given every opportunity of extending its ravages, since it has not been attacked at its origin.” *- Dr Edward Bach MD, in “Heal Thyself: An Explanation of the Real Cause and Cure of Disease”, 1931.*

“Regarding the Teaching of Medical Sciences from a practical and professional point of view, Dr Aud'houi, MD explains very fair ideas, that we fully share: ‘To tell the truth, Professional Teaching of Medicine does not exist: it has never existed. We all leave School, extremely well-educated, I grant, but not knowing much about real Medicine: because there is nothing in common between the Science of Practical Medicine, and the routine which consists of identifying symptoms and lesions and addressing them, all the same, by a sort of unconscious, automatic and forced action, with some kind of Drugs.” *- Pro Dr Victor Aud'houi, MD, in “Introduction au Cours d'Hydrologie Médicale”, Revue Odontologique, January 1892.*

“There is no Wealth but Life. Life, including all its powers of Love, of Joy, and of Admiration. That country is the richest which nourishes the greatest number of noble and happy human beings; that man is richest who, having perfected the functions of his own life to the utmost, has also the widest helpful influence, both personal, and by means of his possessions, over the lives of others.” *- John Ruskin, in “Unto This Last”, 1860.*

“The vast majority of human knowledge in general, of every kind, always exists only on paper, in books, this paper memory of humanity. Only a small part of it is, at any given time, actually alive in any mind.” *- Arthur Schopenhauer, in “Parerga und Paralipomena”, 1874.*

“Prayer alone give us an understanding of Truth; but prayer, coupled with a fervent habitual desire to know and do the will of God, will bring us into all Truth.” *- Mary Baker Eddy, in “Science and Health with Key to the Scriptures”, 1875.*

This Book, along with all the Books, published by the Sovereign Civil and Military Hospitallers Order of the Good News, have been given, and made available, as to once again fulfil that promise of Him, that:

> *"Seek and ye shall find. Knock and it shall be opened unto you."* - *Matthew 7:7-8*

For indeed this Book is given, as to be of benefit to those to whom this Lessons of Truth (not error, but Truth), shall make for the better understanding, of the workings of the body, and to which tools, may be used, and thus to indicate; Which Tools are indeed Usefulness, and How may Each Therapeutic Method, be Correctly Used, in the Treatment of Each and Any Health Condition. For, Each Soul should ever Seek, and be directed to be under the Protection of the Christ Consciousness, in its Seeking for Information, or for Guidance, in Seeking for same, and Ever be Surrounded by that Consciousness.

For, much might be given, as to what man in his estate has gained, and as to how he has gained that knowledge of the seeking for the awareness.

Then, Study From All That Which Here Can Be Obtained, correlating same with that desire to show self acceptable unto Him, The Giver of all good and perfect gifts, making manifest in word, action and deed those lessons gathered; little by little, line upon line, giving them, for that is Service to All.

> ***"But when love to God is man's chief love, then he does not entertain for these objects any other kind of love than that of promoting thereby his love of God.***
> ***The Lord Himself will instruct me. For, as I discovered, I am in such a state that I know nothing on this subject except that Christ must be all in all, so that we of ourselves cannot contribute the least toward it, and still less strive for it: wherefore it is best to surrender at discretion, and were it possible to be altogether passive in this matter, it would be a state of perfection. I saw also in a vision how some beautiful bread was presented to me on a plate. This was a prediction that the Lord Himself will instruct me, as soon as I have attained that state in which I shall know nothing, and in which all my preconceived notions will be removed from me; which is the first state of learning: or in other words that I must first become a child, and that then I shall be able to be nurtured in knowledge, as is being done with me now.***
> ***May God lead me in the right way! Christ said that I must not undertake anything without Him!***
> ***The Word of the Old Testament contains arcana of heaven, and that all and each of the things therein regard the Lord, His heaven, the Church, faith, and the things which are of faith, no mortal apprehends from the letter; for from the letter or the sense of the letter no one sees anything else than that they regard in general the external things of the Jewish Church; when yet there are everywhere internal things which are nowhere manifest in the external, except a very few which the Lord revealed and explained to the Apostles; as, that sacrifices signify the Lord.***

In the following pages by the Lord is meant solely the Saviour of the world, Christ; and He is called Lord without the other names. He is acknowledged and adored as Lord in the entire heaven, because He has all power in the heavens and in the earth.

He commanded also saying:

"Ye call Me Lord, and ye say rightly, for I Am." - John 13: 13

And after the resurrection the disciples called Him Lord.

"Through the whole heaven they know no other Father than the Lord, because they are One, as He said:

"I Am the Way, the Truth, and the Life."

- Philip saith: "Show us the Father."
- Jesus saith to him: "Am I so long time with you, and yet hast thou not known Me, Philip? He that hath seen Me hath seen the Father: how sayest thou then, show us the Father? Believest thou not that I Am in the Father and the Father in Me?
Believe Me that I Am in the Father and the Father in Me" - John 14:6-11." *- Emanuel Swedenborg, in "Documents Concerning the Life and Character of Emanuel Swedenborg", 1877.*

"For in each step of my life I have actually felt, time and again, God's guidance. In each event of life how clear, Thy ruling hand I see, Each blessing to my soul, more dear Because conferred by Thee." *- Dr Lucius Duncan Bulkley, AM, MD, in "Ebenezer, I Samuel 7.12; notes on a busy life", 1925.*

"He that doeth truth cometh to the light, that his deeds may be made manifest, that they are wrought in God." *- John 3:21*

We are Eternal beings, souls trapped in a Three Dimension world. That which vivifies the physical man is the Living Spirt, which is of God, part of God.

"As Human Life, once caused to exist, can never cease, some other provision is necessary for its perpetual continuance. While living in the natural world, Man Is A Spiritual Being, having a material body temporarily adjoined, but not conjoined, as it is never part of himself. The Body receives its form and appearance from the Soul within, being, in fact, a simulacrum of the man himself and bearing the appearance of his personality and identity to others.

Man's real individual identity is established in his spirit, which is himself from first to last, the only change being that of state and spiritual growth, as his character is developed, while in all the changes nothing that has been once ultimated in his life is ever lost. The growth of the spirit, is therefore by accretion only, of those things that have been conjoined to him by being in agreement with his ruling love. **The adjoined material body, serves to keep man within the region of time and space during the term of his natural life. It is in a state of perpetual fluxation, being sustained by food which is assimilated, to replace every moment during natural life that which is rejected as effete. There, is thus a continual process of destruction and reconstruction going on under the guidance of the spirit, but subconsciously, by which it is maintained in a state of representative identity to the spirit within. In no other way can matter appear to live. Only at death do these fluxations cease, and then the material body is resolved into its elements. Being thus spiritual in a natural body, man is, at once, a denizen (admitted to residence) of both worlds; but consciously so in the external one only. He is, however, a recipient of mental impressions from both which constitute his thoughts. Some of these he perceives to arise from external associations, others come he knows not how or whence. The light is there, and will be acknowledged when the eye of the understanding shall be accustomed to its brilliance. The Lord in all His dealings with mankind, works with infinite wisdom and simplicity; and we shall find that the manner in which He reaches down to man is really alike in every case, in Creation, Redemption, and Revelation."** - in "A Spiritual Universe, The Corollary of a Natural One", The New Church Review, January 1909.

"The Power, of who designed the miracle of the human body, was not inept and likely to overlook provision, for its maintenance in health.

Are we to believe that God, created this wonder, with its infinite complexity of reaction, and left it at the mercy of the first, or any, hostile "germ" that happened to cross its path?

> ***"Blinded by "Science" The modern Medical System, to the extent of perhaps 80%, is nothing but a Gigantic, Cruel, Ludicrous, Lucrative, Transparent Fraud. Doctors do not know what disease is nor how it is brought about. They know little of the natural, and nothing at all of the spiritual provisions, either for maintaining or regaining good health. Disease is mostly a more or less gradual degenerative process, due, first, to failure to fulfil the requirements of well being; and, second, to conventional attempts at prevention and cure." - in "New Zealand's Greatest Doctor Ulric Williams, Sourgeon"***

Medical Trade Methods Don't Cure

Their subserviency encourages indolence of body and mind.

The whole tendency of the Medical Trade, is to create and perpetuate sickness, and make it attractive to those lacking, the moral qualities to live healthily. Along comes a medicine man, misinformed, as to the nature of these symptoms, and how they are caused, tears up, muffles the signals, silences the warnings; and so, while the danger still rushes upon him, he deludes the victim, into a false, and frequently, fatal sense of security.

Sir William Osler, the famous physician, teacher and diagnostician, once said:

> ***"We put Drugs about which we know little, into bodies about which we know less, to cure diseases about which we know nothing at all."*** *- Sir William Osler, Surgeon*

What An Admission!

Man exists out of all mental harmony, with the One Source of Life; he makes his body the repository of decaying flesh, mid denatured foods; he introduces into it poisons, in the form of drugs; he stuffs and gluts it with almost incredible quantities of rubbish got up to appeal to his senses; he no longer eats to live, He Lives To Eat; and the Temple (his body) is befouled, and its existence endangered in order that he may continue to gratify his perverted appetites.

> ***"Here is thy lesson; Hear ye all! Beware lest ye as an individual soul, a son, a daughter of God, fail in thy mission in the earth today; that those ye know, those ye contact shall know the truth of God, not by thy word, bombastic words, but in longsuffering, in patience, in harmony, that ye create in thine own lives, for it must begin with thee. God has shown thee the pattern, even one Jesus, who became the Christ that ye might have an advocate with the Father, for the Father hath said: In the day ye eat or use the knowledge for thine own aggrandizement, ye shall die." But he that had persuaded the spirit, the souls that God had brought into being, to push into matter to gratify desire for self-expression, self-indulgence, self-satisfaction, said: "Ye shall not surely die", or what were then the activities of man, for as had been said: "A day is a thousand years, a thousand years as a day." What was the length of life then? Nearly a thousand years. What is your life today? May it not be just as He had given, just as He indicated to those peoples, just as He did to the lawgiver, just as He did to David; first from a 1,000 years to a 120, then to 80? Why? The sin of man in his desire for self-gratification."*** *- in "The Book of Emmanuel or God among men; The Teachings of Him who had walked in Galilee: He that is thy Lord!"*

Symptoms Are of Dual Significance

Symptoms, are Nature's warnings of deflection from "the Law"; they are also evidence of Nature's method of cure. In either case, the more effectively we suppress them, without adequate attention to the underlying disease process and the causes that brought it about, the more effectually may we prevent Nature from achieving her beneficent purpose of protecting us." - Dr Ulric Williams, MD, in "Hints on Healthy Living", 1934.

> ***"Many a person want to be a writer. I Always Encourage Such People. In most cases these individuals are dreaming of wealth and fame, not the Long Hours Alone at the Typewriter. The Reality is that Writing Is a Lonely, Private and Poor-Paying Affair. For every writer kissed by fortune, there are thousands more whose longing is never requited. Even those who succeed Often Know Long Periods of Neglect and Poverty. I Did."*** *- Alexander Palmer Haley, in "The Shadowland of Dreams", 1996.*

> ***"Disease arises, like other mental conditions, from association. Since it is a law of mortal mind that certain diseases should be regarded as contagious, this law obtains credit through association, — calling up the fear that creates the image of disease and its consequent manifestation in the body. This fact in metaphysics is illustrated by the following incident: A man was made to believe that he occupied a bed where a cholera patient had died. Immediately the symptoms of this disease appeared, and the man died. The fact was, that he had not caught the cholera by material contact, because no cholera patient had been in that bed. If a child is exposed to contagion or infection, the mother is frightened and says, "My child will be sick." The law of mortal mind and her own fears govern her child more than the child's mind governs itself, and they produce the very results which might have been prevented through the opposite understanding. Then it is believed that exposure to the contagion wrought the mischief."*** *- Mary Baker Eddy, in "Science, Theology, Medicine", Science and Health with Key to the Scriptures, 1875.*

> ***"Howbeit when he, the Spirit of truth, is come, he will guide you into all truth; for he shall not speak of himself; but whatsoever he shall hear, that shall he speak; and he will shew you things to come."*** *- John 16:13*

Ye Shall Know The Truth

> ***"And ye shall know the truth, and the truth shall make you free."*** *- John 8:32*

The Development And Realisation of A New and Novel Idea

"Much of the colour and flavour of that great mind-fruit, the book, depends upon the atmosphere in which the ideas have ripened, the soil whence the sweet or sour juices have been drawn. Many literary productions which we prize among the brightest of our national glories have grown out of human lives, rooted sometimes in sorrow, sometimes in joy.

There are 3 Stages of general opinions regarding the development and realisation of a new and novel idea:

1. The skeptic will say that it is Impossible.
2. He will say that it is Not Practical; therefore Not Valuable.
3. That it has long been known, and only needed application of certain principles which many might have accomplished by giving the matter close attention.

It is that consistency of physical and mental actions, united at all times to battle against failure in its various guises which chronicles in this volume, not the defeats, but the Triumphs of Genius." - in "Triumphs of Genius", 1893.

A Sunbeam of Secular Truth

> ***"Men of science who are much in the society of the educated world, and especially of those favoured classes who have the finest opportunities of acquiring knowledge, are Struck With the Depth of Ignorance Which They Encounter. The Prevailing Ignorance, therefore, of which we speak, Is The Offspring of an Imperfect System of Education, which has already given birth to great social evils; to financial laws unjust to individuals, and Ruinous to the Physical and Moral Health of the Community. If the public be ignorant of science, and its applications, in their more fascinating and intelligible phases; if our clergy in their weekly homilies, never throw A Sunbeam of Secular Truth among their people; if legislators hardly surpass their constituents in these essential branches of knowledge; how can the great interests of Civilization be maintained and advanced?"*** *- in "Researches on Light - Sanatory, Scientific, and Aesthetica", North British Review, August 1858.*

> ***"Ships that pass in the night, and speak each other in passing; Only a signal shown and a distant voice in the darkness; So on the ocean of life we pass and speak one another; Only a look and a voice, then darkness again and a silence."*** *- Henry Wadsworth Longfellow, in "Tales of a Wayside Inn", 1863.*

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"1. Always make sure that you form a distinct, and clear idea of the matter you are considering.

2. Always avoid vague approximations where exact estimates are possible." *- Professor Pierre Charles Alexandre Louis, MD, observed that All Fevers had the Same Origin; they were Manifestations of the Inflammation of Organs, in his teaching lectures to students, 1834.*

"An investment in knowledge always pays the best interest." *- rev. John Hill Aughey, in "Spiritual Gems of the Ages", 1886.*

The Older the Book The More Likely You Are to Find the Truth

> ***"For my Research, I acquired an Extensive Book Collection. Some Books are well over 100 years old. The Older The Book, The More Likely You Are To Find The Truth."*** *- John Hamer, Author of "The Falsification of Science", 2021.*

Quotations From The Works of Many Talented Men

"The reader will observe that throughout the volume: The Editor has Availed himself, in his Notes, of Quotations From The Works of Many Talented Men, Both Ancient and Modern, In Support of his Assertions; men of sterling abilities, who, for the most part are now beyond the reach of flattery, but who, when living, were among the brightest ornaments of human excellence; **with the cheering hope that this exertions, here given, in the cause of Health and Weal (in a Healthy Prosperous State)**, supported and sanctioned as, they have hitherto been, will again insure as favourable a reception to this edition, of which was to be attributed much to the simplicity of its style and composition; its object being:

> ***"To Hold the Golden Mean,***
> ***To Keep the End in View,***
> ***To Follow Nature."*** *- Lucan, "De Bello Civili", Book II, Verse 381, 46 B.C.*

- Dr Edward Jukes, Surgeon, in "On Indigestion and Costiveness, and the use of Lavaments", 1833.

The Student May Approach The Subject With An Open Mind

> ***"Various Theories and Explanations; which are commonly adduced Have Been Omitted, so that the student may approach the subject with an Open Mind, but with the assurance, that all the movements described, have been thoroughly Tried and Found Useful. He will thus be in the advantageous position that he starts, with No Preconceived Theories, and his mind will be unbiassed. In this manner, we may Ultimately Arrive at the Truth."*** *- Dr Thomas Marlin, MD, MB, DPH, RCPS, DMRE, in "Manipulative Treatment", 1934.*

> ***"Let no corrupt communication proceed out of your mouth, but that which is good to the use of edifying, that it may minister grace unto the hearers."*** *- Ephesians 4:29*

"An author who presents something unusual appeals with dignity to posterity, because a tribunal must first be formed before which the unusual can be judged, and only time can establish such a court, stripping the strange from the strangest, and presenting it as something familiar." *- Goethe, on his Physics.*

To Show The Intricate Relations of Cause And Effect In Disease

"We Want a Critical Investigation of Skin Diseases, in their Relation with Diseases of Other Organs. Are Diseases of the Kidney, or of the Liver frequently productive of them? And, if so, what are the peculiarities of such? Which are in Special Relation with the Nervous System? Are Diseases of the Intestinal, or Pulmonary Mucous Membranes Frequently Associated with those of the Skin?

There is another important direction in which work is wanted. We refer to the Anatomical seats of Morbid Processes. The Germans have recently been zealous in this matter, at least so far as microscopic investigation is concerned; but there are yet many points not cleared up; and some observers are quite content to speak of a papule, pimple, or tubercle, as if developed in the epidermis like a molehill in a field, without one special reference to structure. Others assign **a very important position to the sebaceous Glandular System, and hold that these little glands are very liable to be attacked by Inflammation from a variety of causes;** and that, in many very different maladies, the eruption has its starting-point in them. **Acne, Molluscum (small raised bumps), and Milium (cyst) have long been known to be thus placed; but there are those who believe that in the eruptions of lichen, measles, scarlet fever, variola, boils, Ecthyma, Impetigo, etc., the Inflammation commences in Sebaceous Glands** (located in the mid-dermis and almost always develop alongside a hair follicle, with an outlet emptying into the follicular canal).

We known that Season (temperature changes) influences these maladies.

When the diseases of the outer investment of the body (Skin) have been more thoroughly investigated, they will assume a very important place in relation to general medicine. It will be acknowledged that these maladies offer to the clinical teacher the very best material by which to show the Intricate Relations of Cause and Effect in Disease, to illustrate the great varieties in the Inflammatory Process." - in "British Medical Journal", 22 January 1870.

"The Skin, The Organ Which Is Often Held To Be A Mirror Reflecting Changes In Other Parts of the Body." *- in "Pills, Profits, and Politics", 1974.*

> ***"All The Cases Had Mental Symptoms; but the other symptoms of each case were either Digestive or Skin. This suggests that there may be an Alternation of Skin and Digestive Symptoms Similar to the Alternation we find with Asthma and Skin."*** *- Dr Lees, MD, in "The Role of Bowel Flora in Chronic Disease", British Homeopathic Journal, January 1949.*

> ***"If The Cause Maintaining The Disease Still Persists. Some circumstance is to be found in the regimen or the environment of the patient which Must Be Eradicated If The Cure Is To Permanently Come To Pass."*** *- Dr Samuel Hahnemann, MD, in "Organon of the Medical Art", 1755.*

Our Women Never Die in Childbirth, They Do Not Allow Medical Doctors to Attend Them on Such Occasions

"The horse, the dog, the ox, and others of the brute creations, we are assured by the breeders of those animals, **are but little subject to the fatal diseases of the lungs and others of the respiratory or digestive organs; nor to diseases of the spine, to Idiocy or Deafness; and their teeth continuing to perform their intended functions to the close of natural life.**

Not 1 in a 100 of these animals, with Proper Care, and a Sufficiency of Food, would fail to reach that period, unless destroyed by intention or accident.

Mankind are everywhere a departure from this Sanitary condition, though the Native Races often-times present a near approach to it, as **I have witnessed amongst the Tribes of North, and South America, amongst whom, in their primitive condition, the above-mentioned diseases are seldom heard of; and the almost unexceptional regularity, beauty, and soundness of their teeth last them to advanced life and old age.**

In civilized communities, better sheltered, less exposed, and with the aid of the ablest professional skill, the Sanitary condition of mankind, **with its variety, its complication and fatality of diseases; its aches and pains, and mental and physical deformities, presents a more lamentable and mournful list, which plainly indicates the existence of some extraordinary, latent cause, not as yet sufficiently appreciated, and which it is the sole object of this little work to expose.**

I advise you to bear in mind the awful Bills of Mortality amongst civilized societies, which I have quoted; **and realize the dangerous race which civilized man runs in life (how very few live to the age designed by God), how many perish in infancy, long before they are of your age; and consequently the**

dangers which you have already passed, and contrast all of these with those of the Wild Indians, who by God, are no stronger than we are, but who Generally Live to a Good Old Age, with comparatively few bodily pains in life, and their teeth almost uniformly regular and sound, without the aid of Dentists and tooth-brushes.

An Indian child is not allowed to sleep with its mouth open, from the very first sleep of its existence; the consequence of which is, that while the teeth are forming and making their first appearance, they meet (and constantly feel), each other; **and taking their relative, natural positions, form that healthful and pleasing regularity which has secured to the American Indians, as a Race, perhaps the Most Manly and Beautiful Mouths in the World.**

Healthy Living Makes No Derangements or Deformities in Teeth or Mouths

Healthy Living Makes No Derangements or Deformities in Teeth or Mouths; but bad habits or accidents produce the disagreeable derangements of the one, and consequently the disgusting expressions of the other, which are so often seen.

Amongst 2 Millions of these wild people whom I have visited, I never saw, or heard of a Hunch-Back (crooked spine), though my inquiries were made in every tribe; nor did I ever see an Idiot, or Lunatic amongst them, though I heard of some 3 or 4 during my travels, and perhaps of as many Deaf and Dumb.

Shar-re-tar-rushe, an aged and venerable chief of the Pawnee-Picts, a powerful tribe living on the head-waters of the Arkansas River, at the base of the Rocky Mountains, told me in answer to questions:

"We very seldom lose a small child, none of our women have ever died in childbirth (they have no medical attendance on these occasions), we have no Idiots or Lunatics, nor any Deaf and Dumb, or Hunch-backs, and our children never die in teething."

This Tribe I found living entirely in their primitive state; their food Buffalo flesh and Maize, or Indian corn.

Ski-se-ro-ka, chief of the Kiowas, a small Tribe, on the head-waters of the Red River, in Western Texas, replied to me: "My wife and I have lost 2 of our small children, and perhaps 10 or 12 have died in the tribe in the last 10 years, we have lost none of our children by teething, **we have no Idiots, no Deaf and Dumb, nor Hunch-Backs."** This Tribe I found living in their primitive condition, their food Buffalo flesh and venison.

Cler-mont, chief of the Osages, replied to my questions:

"Before my people began to use "fire-water" (whiskey), it was a very unusual thing for any of our women to lose their children; but I am sorry to say that we lose a great many of them now; we have no Fools (Idiots), no Deaf and Dumb, and no Hunchbacks, our women never die in childbirth nor have dead children."

Naw-kaw, chief of the Winnebagoes, in Wisconsin, the remnant of a numerous and warlike tribe, now semi-civilized and reduced:

"Our children are not now near so healthy as they were when I was a young man; it was then a very rare thing for a woman to lose her child; now it is a very difficult thing to raise them," to which his wife added "since our husbands have taken to drink so much whiskey our babies are not so strong, and the greater portion of them die; we cannot keep them alive."

The chief continued:

"We Have No Idiots, No Deaf and Dumb, and No Hunch-Backs; Our Women Never Die in Childbirth, and they Do Not Allow Medical Trade Doctors to attend them on such occasions." - in "The Breath of Life", 1862.

Know This First

> ***"Who hath put wisdom in the inward parts? or who hath given understanding to the heart?"*** *- Job 38:36*
>
> ***"Modern scientific research has placed upon a sure foundation the great truth (dimly recognized by the earliest physicians, but wholly lost sight of during the dark ages): That Healing Power Is Not Possessed By Physicians, Nor By Remedies, but that the Curative Process Is Simply a Manifestation of The Forces Which Dwell Within the Body, and Which are Normally Manifested in Creating and Maintaining the Organism. In Other Words: THE BODY HEALS ITSELF!***
> ***WATER: Applied Externally or Internally, and at Such Temperatures As May be Required; Is An Agent Which More Fully Than Almost Any Other Co-Operates with the Healing Powers of the Body, in Resisting the Onset and Development of Pathogenic Processes. There Is No Other Remedy By Which the Movements of the Blood, and the Blood Supply, both general and local, and in fact every form of Vital Activity, May Be So Readily Controlled as by Hydriatic Applications."*** *- Dr John Harvey Kellogg, MD, in* ***"Rational Hydrotherapy: a Manual of the Physiological and Therapeutic Effects of Hydriatic Procedures, and the Technique of their Application in the Treatment of Disease"****, 1918.*
>
> ***"First Remove the Cause, and then Assist Nature to Restore the patient to Health."*** *- in "New York Medical Journal", 16 October 1897.*

Emunctology, more than a Profession it is a Vocation.

The Aim is not driven to acquire fame or fortune.

The Aim is ever to be of Service. To be Good, to be Useful, to Aid those that SEEK, not those who don't seek rather those that SEEK.

For Emunctology is not Medicine, its not part of the Medical Trade.

For Medical Science: To be correctly defined is that which is Untrue, and in its Nature; Dubious and Treacherous, thus, that which is beneath, or lower life.

"I believe God's light protects me in all my work and it touches those I lay my hands upon. I am simply a natural born healer and a channel for God's Healing Energy.
I know of whose sole purpose is to do good and ease others suffering." *- in "My Life as a Healer", 1999.*

Healing is Voltage

"The recognition that all matter is energy forms the foundation for understanding how human beings can be considered dynamic energetic systems. Through E = mc 2, "Mass and Energy are both but different manifestations of the same thing"- Albert Einstein, proved that energy and matter are dual expressions of the same universal substance. That universal substance is a primal energy or vibration of which we are all composed." *- Dr Richard Gerber, MD, in "Vibrational Medicine", 2001.*

The Human Body is made up of Electronic Vibration, with each atom, and element of the body, each organ and organism of the Body, having its Electronic, or Unit of Vibration: necessary for the sustenance of, and equilibrium in, that; particular organism.

"The quantum mechanisms how life efficiently utilises energy and transmits information: Frequency Medicine, an emerging cross-discipline of both quantum mechanics and Biomedicine, is a promising turning point, from the Matter Level, to the Energy Level. Recognizing the pivotal role of Molecular Vibrational Frequencies in resonant energy coupling, and transmission; underscores the potential of frequency to precisely regulate biomaterial vibrations, influencing interactions and reactions in living organisms. According to Hippocrates: "the best doctor on earth is the sun." Finsen successfully Cured Smallpox lesions and lupus-related skin infections using Red Light and Violet Light. Dr Mester first found the anti-inflammatory and analgesic effects of laser, which opened the commencement of widespread application and research of laser therapy. The "Precious Essential Formulary for Emergency", by Simiao Sun, 652 AD, records that powdered magnets can be used to treat cold sores. Music Can Cure Diseases. The Therapeutic Effects of Music were first systematically described in Musical Medicine, by the physician Brow in the early 19th century. Hippocrates also said: "If there were a way to heat bones, then all diseases can be treated." In recent years, Photothermal Therapy has emerged as an Effective Means for Treating Tumors. According to quantum theory, Matter is Composed of Rotating Particles with Different Vibrational Frequencies, Its Essence Is Energy. The human body can be considered as a Frequency Assemblage." *- in "Spatiotemporal omics of life energy", MedComm – Biomaterials and Applications, January 2024.*

Healing Through Music

"If you will sing and praise and pray. First sing in your soul; then with your voice. So we lay down the metaphysical. This is a creative law, through the vibrations of the voice joined with high thinking, every cell in the body is set into action, and not only in the body but out into the environing thought atmosphere the vibrations go and break up all crystallized conditions.

The Universe Is In Vibration

The Whole Universe Is In Vibration, and that vibration is under law. Each particular thing has its rate of vibration. Heat, light, and color are different rates of vibration in one field of primal energy. Different colors are caused by the different frequencies of the vibrations as they strike the eye. But what causes vibration? Mind. The cells of the body are centers of force in a field of universal energy. There are no solids. That which appears solid is in reality the scene of constant activity. The eye is not keyed to the pulsations of this universal energy and is therefore deceived into believing that things are solid.

All Energy and Life are governed by laws of spiritual harmony.

The Mind

If the mind that receives sound vibrations is in spiritual consciousness, the body responds to the higher activity. If our mind were trained to think thoughts that harmonized with Divine Mind, we could hear the music of the spheres.

You can drive away the gloom of disappointment by resolutely singing a song. Cultivate the power of music in connection with the understanding of Truth, and thus rend all the bonds of sin, sickness, and death.

New Hymnal With Words of Truth

The world needs a New Hymnal, with Words of Truth only and music so strong and powerful that it will penetrate to the very center of the soul.

Our body is now tuned to the divine harmony; we shall find the keynote by listening in the Silence to the singing soul. The new life in Christ fills me with zeal to live, and I am healed. In putting on Christ (developing the supermind), every faculty has to be raised to supermind proportions. The exact mathematical degree of power necessary to Synchronise Oneself with the Kingdom of the Heavens in which the supermind functions has not been revealed to human consciousness, if indeed it can be. A British Astronomer Sir James Jeans says that he has discovered that God is a Great Mathematician.

> ***"The Great Architect of The Universe now begins to appear as a pure mathematician. If we spin a half-penny, nothing within our knowledge may be able to decide whether it will come down heads or tails. Yet if we throw up a million tons of half-pence, we know there will be 500,000 tons of heads and 500,000 tons of tails. The experiment may be repeated indefinitely, and will always give the same result. We may be tempted to instance it as evidence of the uniformity of nature, and to infer the action of an underlying law of causation; in actual fact it is an instance only of the operation of the purely mathematical laws of chance. Today there is a wide measure of agreement, which on the physical side of science approaches almost to unanimity, that the stream of knowledge is heading toward a non-mechanical reality; the universe begins to look more like a great thought than a great machine. Mind no longer appears as an accidental intruder into the realm of matter; we are beginning to suspect that we ought rather to hail it as the creator and governor of the realm of matter. Not, of course, our individual minds, but the mind in which the atoms, out of which our individual minds have grown, exist as thoughts."*** *- Sir James Jeans, British Astronomer, in "The Mysterious Universe", 1930.*

The logical conclusion of all wise philosophers is that: "Everything in the universe both seen and unseen is under mathematical law."

> ***"Even the very hairs of your head are all numbered."*** *- Luke 12:7*

Our minds determine the character of our words and what the mind determines the mouth obediently utters, its words loaded with constructive or destructive electrons all mathematically arranged to build up or blow up both ourselves and our aims and ideals. The beginning of the culture of the mind that enables it to make contact with the realm of creative ideas is faith. When we know that every word is mathematically linked with certain creative ideas and that Divine Mind has made it possible for every one of us to draw upon these ideas mentally, we have the key to all creative processes. I am at peace because I trust divine justice to regulate my mind, body, and affairs. Man's whole character is determined by the thoughts for which he allows a place in his mind. The Mind of Spirit is harmonious and peaceful, and it must have a like manner of expression in man's consciousness. Neither can man reflect the steady strong glow of Omnipotence when his mind is disturbed by anxious thoughts, fearful thoughts, or angry thoughts. Be at peace and your unity with God-Mind will bring you health and happiness." Charles Fillmore, in "Jesus Christ Heals", 1939.

"Every cell in the body is designed to run at -20 to -25 millivolts. To Heal, We Must Make New Cells. To make a new cell requires -50 millivolts. Dr Robert Becker, MD, Orthopedic Surgeon, discovered that we have an entire second nervous system made of fibrous tissue surrounding our nerves. He named this "The Analog Perineural Nervous System." The nerve-impulse nerves of the brain and body are digital. That means that information is in discrete steps of on/off. It is sensitive to the frequency of the signal. It controls the conscious mind, and the autonomic nervous system (automatic control of blood pressure, breathing, etc.). The second nervous system of the body is the perineural system of glial cells and Schwann cells, etc., that surround the other nerves. It is an analog system, meaning continuously variable strength of signal, direction of flow, and waves of strength. It controls growth, healing, and biological cycles.

Where it was always thought that the fibrous tissue of the body serves only as structural support, Becker and Nördenstrom showed that fibrous tissue in the body also serves to conduct electrons, much like copper wire in our homes.

> ***"Loss of energy is the origin of pathologic processes. Reverse the process, restore energy, and health will result. Health is the result of normal energy interchange. Disease is the result of abnormal energy function. The problem then becomes how best to restore and maintain normal energy flow. Dr Taylor has also stated positively that manipulative pressure and stretching are the most effective ways of modifying the energy potentials of abnormal tissues."*** *- in "The Journal of the American Osteopathic Association", 1968.*

> ***"We have natural signatures. We all emit. And each cell resonates at a different frequency. We are Energetic Beings. It's all Voltage; pH is Voltage, too."*** *- Dr Carrie Madej, DO, in "The Shawn Johnson Podcast", 13 January 2026.*

The Importance of pH

You will recall that I began my journey toward getting well by recognizing that cells are designed to run between a pH 7.35 and pH 7.45.

I also began my journey with the idea that if I could figure out how to make one cell work I could make them all work. I want to focus on the importance of pH. When I was trying to figure out how to get well, I couldn't remember a lot about pH. I remembered that it was something about acid/base balance. So I began to read about pH. What I discovered is that pH (Potential Hydrogen) is really a measurement of voltage.

One can see that a pH of 7.35 is the same as a voltage of −20 mV. A pH of 7.45 is the same as a voltage of −25 mV. Thus we see that all cellular biology texts tell us that cells are designed to run between −20 and −25 millivolts of electron donor status! Electron stealers cause damage, are a pH from 0 to 6.9, are acidic, are free radicals, are the positive pole, are destructive, and at the atomic level spin left. You will hear statements such as “all disease occurs when you are acidic.” What this is really saying is that all disease occurs when your voltage is low or in an electronic stealer state.

pH Between 7.35 & 7.45

You will hear statements such as “Alkalize or Die.” What this means is that; you must have electrons available to do work or your cells will die. An antioxidant is a molecule capable of giving away electrons. Thus when your mother says: “eat your vegetables”; she is saying that the vegetables contain electrons that are good for you. We maintain our health and heal primarily by making new cells. To make a new cell requires a voltage of −50 mV. Chronic disease is always defined by having low voltage.

Water

Several bad things happen when Voltage drops. The obvious one is that organs simply don’t have enough horsepower to do their job. Another is that they don’t have the energy to get rid of Toxic Waste, which begins to accumulate. Remember that at -50 mV, there is a pulsing pain. When you have low voltage, it simply hurts all the time. Thus pain is simply a symptom of abnormal Voltage. You correct it by correcting the voltage. If you put a tube into a glass of Water and began bubbling Oxygen into the Water, the amount of Oxygen that will dissolve in the Water is dictated by the Voltage of the Water. As voltage is raised, more Oxygen will dissolve in water. However, as Voltage drops, Oxygen comes out of solution and leaves the Water. Our cells are 75% Water. Thus it is the basis of who you are and how healthy you are. The cells are composed of water, it is also what the body uses to wash itself internally; to clean away. Thus as voltage begins to drop in us, Oxygen leaves the cells. This has serious consequences. Water from the ground contains electrons. We call this “Alkaline Water.” However, when chlorine and fluoride are placed in the water, it turns into an electron stealer. Thus every time we drink such water, it steals electrons from us.

The water we should be drinking should contain electrons and be clean and free from Toxins.

> ***"The Main Function of the Cardiovascular System; is to deliver a sufficient quantity of Oxygenated Blood to the tissues, cells, and organs of the body in order to provide the cells with essential Nutrients for metabolism, and for the Removal of Waste Products. All cells require and utilize Oxygen. Oxygen is transported to various cells and tissues via Red Blood Cells flowing through the Microcirculation of an organism."*** *- in "Effects of Light Exposure on the Release of Oxygen from Hemoglobin in a Red Blood Cell Suspension", 2008.*

Oxygen

Oxygen is an important element in the the metabolic process of the body system. It is fundamental to speed up, and resolve among other functions the: Regeneration of Body Tissue. What then; are the Physiological Aspects of Oxygen in the System? When Oxygen is available, for every unit of fatty acids run through the Krebs cycle, we create 38 molecules of Adenosine Triphosphate (ATP), nucleoside triphosphate that provides energy to drive and support many processes in living cells. However, if Oxygen is unavailable, only 2 molecules of ATP are created for every unit of fatty acids. Thus as Voltage drops, and Oxygen levels drop, our Metabolism goes from "61 kilometres per 4 litre, to 3 kilometres per litre." Thus it is very difficult for cells to have enough energy to function with such inefficient metabolism. Another problem of decreased Oxygen is infections. Our bodies contain 30 to 40 Trillion Microorganisms. However, most of these Microorganisms Are Inactive; As Long as Oxygen Is Present. However, When Oxygen Levels Drop, These Microorganisms Wake Up. The first thing they want to do is have lunch. And they want to have you for lunch.

Toxins

One must also have the raw materials necessary to make new cells, and to eliminate the toxins or infections present that will damage the new cells.

Medical Trade Medication

Most Pharmaceuticals and Surgery; speak to eliminating symptoms, but do not speak to healing. Absence of Symptoms, is not the same as Healed and Healthy. You can take all of the medications you like and do as much surgery as you like, but you will not heal unless you have −50 mV, raw materials, and lack of toxins." - Dr Jerry L. Tennant, MD, in "Healing is Voltage", 2014.

The Warburg Hypothesis

Otto Heinrich Warburg, Physiologist, Was nominated for the award 47 times.

In 1931 received the Nobel Prize in Physiology or Medicine for "discovery of the nature and function of the respiratory ferment."

"Cancer, above all other diseases, Has Countless Secondary Causes. But, even For Cancer, There Is Only One Prime Cause. The Prime Cause of Cancer Is The Replacement of the Respiration of Oxygen in normal body cells By a Fermentation of Sugar. All normal body cells meet their energy needs by respiration of Oxygen, whereas cancer cells, meet their energy needs in great part by Fermentation. From the standpoint of the physics and chemistry of life, this difference between normal and cancer cells is so great that we can scarcely picture a greater difference. Oxygen Gas; the donor of energy in plants and animals, is Dethroned in the cancer cells and replaced by the Fermentation of Glucose. All Cancer Cells, Without Exception: Must Ferment, and no normal growing cell ought to exist that ferments in the body. Cancer metabolism has now been induced artificially in body cells by the simplest conceivable experimental procedure. If one provides an Oxygen pressure so reduced that the Oxygen respiration is partially inhibited, the purely aerobic metabolism of cells is quantitatively altered within 48 hours. Oxygen pressures that inhibit respiration 35% can occur at the end of blood capillaries in living animals so that the possibility arises that cancer may result when too low Oxygen pressures occur. De-differentiation begins at once when respiration is inhibited in any way. There exists no alternative.

It Is The First Precondition of the Proposed Treatment that All Growing Body Cells be Saturated With Oxygen. To Prevent Cancer It Is Therefore Proposed:

1. To keep the speed of the bloodstream so high, that the venous blood still contains sufficient Oxygen.
2. To keep high the concentration of hemoglobin in the blood.
3. To add always to the food, even of healthy people, the active groups of the respiratory enzymes, and to increase the doses of these if a pre-cancerous state has already developed. If at the same time, exogenous carcinogens are excluded rigorously, then most cancers may be prevented.

These proposals; may be realized by everybody, everywhere, at any hour. The prevention of cancer, requires no government help and no extra money. Nobody today can say that one does not know what cancer, and its prime cause be.

> ***On the contrary, there is no disease whose prime cause is better known so that today, ignorance is no longer an excuse. How long prevention will be avoided depends on how long the prophets of agnosticism will succeed in inhibiting the application of scientific knowledge in the cancer field. In the meantime, millions of men must die of cancer unnecessarily. If one puts embryonic mouse cells into a suitable culture medium saturated with physiological Oxygen pressures, they will grow outside the mouse body, in vitro, and indeed as pure aerobes, with a pure Oxygen respiration, without a trace of fermentation. However, if during the growth one provides and Oxygen pressure so reduced that the Oxygen respiration is partially inhibited, the purely aerobic metabolism of the mouse embryonic cells is quantitatively altered within 48 hours, in the course of 2 cell divisions, into the metabolism characteristic of Fermenting cancer cells."*** *- Dr Otto H. Warburg, MD, in "On the Origin of Cancer Cells", Science, 24 February 1956; "The Prime Cause and Prevention of Cancer", August 1966.*

Warburg hypothesized (Warburg Hypothesis) in 1930 that a Disturbance / Interruption in the function of mitochondria in cancer cells; was the main reason for the growth of cancer. The Warburg Effect", refers to the high rate of glycolysis cancer cells use even with Oxygen, and the related phenomenon of voltage-dependent anion channels; playing a role in limiting mitochondrial metabolism within these cells. This disruption could be measured electrically: A normal, fully functional cell has a charge of -70 to -90 millivolts at birth.

Over time, this cell charge decreases to -50, and -35mV. Sick cells and cancer cells, have a charge of -20mv to -15mv. This means that each cell has a small electric pump inside it, that brings food into the cell, and removes Toxins (both metabolic and waste products). In his classic treatise The Prime Cause and Prevention of Cancer, Warburg proposed that an improper utilization of minerals and vitamins and a toxic physical state might contribute to a lowering of Oxygen in the body's cells with the ultimate result being cancer.

Over time (if the body is not kept cleansed), the cell's ability to perform its tasks is compromised when so much waste and toxins accumulate in it (Auto-Intoxication: Toxaemia). Thus at some point, it will fail.

> ***"Cancer cells rewire their metabolism to promote growth, survival, proliferation, and long-term maintenance. The common feature of this altered metabolism is increased glucose uptake and fermentation of glucose to lactate. This phenomenon is observed even in the presence of completely functioning mitochondria and together is known as the Warburg Effect. The Warburg Effect has been documented for over 90 years and extensively studied over the past 10 years with thousands of papers reporting to have***

> ***established either its causes or its functions. Extensive research on the Warburg Effect and its functions in cancer cells have advanced our understanding of its causes and requirements for tumor cell proliferation."*** *- in "The Warburg Effect: How Does it Benefit Cancer Cells?", Trends Biochem. Sci.", March 2016.*
>
> ***Adenosine Triphosphate (ATP) a nucleotide triphosphate that provides energy to drive and support many processes in living cells, such as muscle contraction, nerve impulse propagation, and chemical synthesis. Found in all known forms of life, it is often referred to as the "molecular unit of currency" for intracellular energy transfer.***

"Energy Is Necessary For Tumor Cell Viability and Growth.

Aerobic glucose-driven lactic acid fermentation is a common metabolic phenotype seen in most cancers including malignant gliomas.

This metabolic phenotype is linked to abnormalities in mitochondrial structure and function.

A luciferin-luciferase bioluminescence ATP assay was used to measure the influence of amino acids, glucose, and Oxygen on Adenosine Triphosphate (ATP) content and viability in mouse (VM-M3 and CT-2A), and human (U-87MG) glioma cells that differed in cell biology, genetic background, and species origin. Oxygen consumption was measured using the Resipher system.

Extracellular lactate and succinate were measured as end products of the glycolysis, and glutaminolysis pathways, respectively.

The Results Showed that:

1. **Glutamine was a source of ATP content irrespective of Oxygen. No other amino acid could replace glutamine in sustaining ATP content and viability;**
2. **ATP content persisted in the absence of glucose and under hypoxia, ruling out substantial contribution through either glycolysis or oxidative phosphorylation (OxPhos) under these conditions;**
3. **Mitochondrial complex IV inhibition showed that oxygen consumption was not an accurate measure for ATP production through OxPhos.**

The glutaminase inhibitor, 6-diazo-5-oxo-L-norleucine (DON), reduced ATP content and succinate export in cells grown in glutamine.

The data suggests that mitochondrial substrate level phosphorylation in the glutamine-driven glutaminolysis pathway contributes to Adenosine Triphosphate (ATP) content in these glioma cells.

A new model is presented highlighting the synergistic interaction between the high-throughput glycolysis and glutaminolysis pathways that drive malignant glioma growth and maintain ATP content through the aerobic fermentation of both glucose and glutamine.

We also found that ATP content through OxPhos alone was unable to maintain bioluminescence of glioma cells in the absence of glucose and glutamine, indicating that these metabolites are both necessary and sufficient for maintaining growth of these glioma cells.

A new metabolic model is presented highlighting the synergistic interaction between the high-throughput glycolysis and glutaminolysis pathways that converge on anabolic intermediates and maintain Adenosine Triphosphate (ATP) content through the aerobic fermentation of both glucose and glutamine.

Finally, the findings from this study can provide a general mechanism explaining the therapeutic efficacy seen from in vivo studies where the simultaneous restriction of glycolysis and glutaminolysis under nutritional ketosis enhance survival of young and adult mice bearing malignant brain tumors (Mukherjee et al., Citation2019; Citation2023; Seyfried et al., Citation2021; Citation2022)." - in **"Amino Acid and Glucose Fermentation Maintain ATP Content in Mouse and Human Malignant Glioma Cells"**, SN Neuro 2 December 2024.

Clarity on the Warburg Effect

> ***"Otto Warburg discovered that tumours consume tremendous amounts of glucose relative to most non-transformed tissues, and that the majority of glucose consumed by tumours is fermented to lactate, rather than oxidized in pathways that require respiration. This phenotype is referred to as "aerobic glycolysis," because unlike carbohydrate fermentation in response to oxygen limitation, aerobic glycolysis involves high levels of fermentation even when oxygen is abundant.***
>
> ***Aerobic glycolysis a hallmark of proliferative metabolism found across many kingdoms of life, but is frequently associated with cancer cells, and is known as the Warburg effect in this context. Aerobic glycolysis reflects a metabolic state in which the demand for Nicotinamide Adenine Dinucleotide (NAD+ an essential coenzyme involved in hundreds of cellular processes including energy metabolism), for oxidation reaction supersedes the cellular demand for Adenosine triphosphate*** *(ATP a nucleoside triphosphate that provides energy to drive and support many processes in living cells)." - in "New Clarity on the Warburg Effect", Frederick National Laboratory for Cancer Research, National Cancer Institute, 13 January 2021.*

NAD+ is a crucial coenzyme that helps generate ATP, the energy currency of the cell. During metabolic processes like glycolysis and the citric acid cycle, NAD+ accepts a hydride (H−) and 2 electrons to become NADH.

NADH then carries these electrons to the electron transport chain, where the energy they release is used to synthesize large amounts of ATP through oxidative phosphorylation. ATP is also necessary for cellular processes, including a step in the production of NADP+ from NAD+.

The relationship between NAD+ and ATP is a cycle of energy conversion and regulation. NAD+ acts as a mobile electron carrier, transferring energy harvested from food molecules to the ATP-generating machinery in the mitochondria.

Conversely, ATP provides the energy needed to convert NAD+ to NADP+.

This interdependency ensures cells can effectively produce and use energy.

Human Energy Field

"Physiology Interacts with its environment via Ambient Fields such as:

1. **Light.**
2. **Sound.**
3. **Electricity.**
4. **Magnetism, and with all other living organisms to generate massive amounts of information in the form of;**
5. **Energy Fields.**

Voltage Potentials (VPs) across cell membranes direct ion flux, modulating cell function. Voltage Potentials are involved in the therapeutic effects of Pulsed ElectroMagnetic Field (PEMF) on immune function and tissue regeneration, on organ-associated frequencies instrumental in the Endocrine Systems, and on the regulatory mechanisms of neurotransmitter conversion of external fields into chemical or electrical energy involved in mind–body function known as PsychoNeuroImmunology (PNI).

The subtle energies involved in these systems exhibit the internal and external aspects of the human being described as the Human Biofield, or Human Energy Field (HEF). Quantum Physics teaches us there is no difference between energy and matter. All systems in an organism, from the atomic to the molecular level, are constantly in motion-creating resonance.

This resonance is important to understanding how electromagnetism (radiation/light) can have different effects on the body.

Cerebral Spinal Fluid carries information that affects the:

1. **Endocrine System.**
2. **Immune System.**
3. **Central Nervous System (CNS).**
4. **Sympathetic Nervous System (SNS).**
5. **Parasympathetic Nervous System (PNS).**

Research suggests that: the Mind, and Body Communicate in a Bidirectional Flow of Hormones; Neuropeptides and Cytokines.

Electro-Therapy is the use of known Subtle Energy Fields; to Therapeutically Assess and Treat Energetic Imbalances, bringing back to Homeostasis the Body's Systems:

1. **Neurological.**
2. **Cardiovascular.**
3. **Respiratory.**
4. **Skeletal.**
5. **Endocrinal.**
6. **Emotional/psychological.**

Knowledge of the existence of the Human Energy Field, Is The First Step to Understanding Integral Physiology, which Unites: Body, Mind, and Spirit; to Treat the Entire Human Being; not just the physiology. Disturbances in the coherence of energy patterns of the Human Energy Field are indications of disease, and aging. Human beings are composed of information (energy) interacting with other energy (environment) to profoundly impact our Physical and Emotional Health. The Human Energy Field has been investigated in scientific laboratories where photon emissions were detected using photometers and colour filter. Human Energy Vibrations were recorded at 1,000 times higher in frequency than the electrical signals of nerve and muscle, with continuous dynamic modulation unlike the pulsing signals of the nervous system.

Energy in the Human Energy Field is typically referred to as Subtle Energy, which is Electro-Magnetic In Nature. It is a system of wave-particle matter, transmitting and receiving vibrational information governing the physical matter of the body. Healing is achieved by directing coherent, harmonic energy into distortions caused by stressors and disease. Biochemistry, is based on an understanding of the flow of energy that drives chemical reactions.

Physical properties of molecules can be combined to express internal energy and thermodynamic potentials, which are necessary for Equilibrium, and Homeostasis in spontaneous processes.

Parameters of these Fields include: Frequency, Amplitude (Field Strength), Waveform, and Time of Exposure. Recognition of physiological sensitivities to exogenous Electromagnetic Field came from the observation of internal endogenous electrical processes. An example of this is the piezoelectric properties of bone that use electromechanical control to determine which cells become osteoblasts or osteoclasts. By modulating cellular processes with Pulsed ElectroMagnetic Field, windows of opportunity for therapeutic application have been discovered for improving the regeneration of osteoblasts to bone before becoming osteoclasts.

All cells produce Electromagnetic Fields because the human body produces complex electrical activity in all the body's 210 different cell types. Neurons, Endocrine cells, and muscle cells are all referred to as "excitable cells."

These cells produce current (via electron transfer); magnetic field (via moving charges); a pulsed frequency; as well as pH, Oxygen, carbon dioxide, and light (via Biophotons). Detailed clinical research in biophysical stimulation has identified specific cellular processes responding to Electromagnetic Forces.

Selective pathways at the Cell Plasma Membrane are activated depending on the Pulsed ElectroMagnetic Field applied.

These include voltage-gated Calcium channels activated by capacitive coupling, intracellular Calcium flux modulated with inductive coupling, and inositol phosphate by mechanical stimulation.

Basic research on cells, animals, along with clinical studies have reported therapeutic dosimetries for frequency, amplitude (field strength), waveform, orientation, and time of exposure needed to activate specific processes in specific cells.

Processes activated by Pulsed ElectroMagnetic Field signals have been reported in the Plasma Membrane's Cell surface receptors through the cytoplasm into the nucleus and genes, where transcription factors affect translation of cell function. Externally applied Electromagnetic Field, can affect orientation, migration, and proliferation of cells, Playing Key Roles In Healing.

Research shows Pulsed ElectroMagnetic Field at Extra Low Frequencies (ELFs) is beneficial to immune system modulation, as well as tissue regeneration. Pulsed ElectroMagnetic Field can pass through the skin into the body's conductive tissue, resulting in reduced pain and edema, and stimulation of wound healing after trauma.

Electromagnetic Therapies can affect cell signaling systems through the modulation of cytokine function, second messengers such as cyclic adenosine monophosphate, transcription factor nuclear factor kappa B, and tissue regeneration, without cytotoxic or genotoxic effects.

EMFs oscillate at various frequencies, however, Extra Low Frequencies (<100 Hz) are most commonly used for therapeutic purposes.

Touch therapies work using touch, interaction, and certain protocols to modulate energy imbalances in the Human Energy Field.

The subtle energy of the Human Energy Field is easily modulated by the Therapist's Hands. The client and practitioner work together using breathing techniques to move stagnant or blocked energy from the cells, across the tissues and through the organs. Human touch therapies are patient–practitioner oriented, where both the giver and receiver of the energy treatment must work in tandem for beneficial results to occur. The practitioner grounds and centers himself, meaning all thoughts, emotions, and physical sensations are neutralized. During optimal healing states, our bodies resonate at certain frequencies (0.3–100 Hz), which correlate with delta, theta, alpha, and beta brain waves.

Cellular Voltage Potentials (VPs)

The human body is controlled primarily by physics that drives the chemistry and biology. Therefore, to understand how the body works, it is important to understand physics and electronic applications of cellular structure.

Endogenous VPs control cell behavior and instruct pattern regulation in vivo.

Cells are designed to operate with a pH between 7.35 and 7.45.

This equates to a voltage of between #20 and þ125 mV.

The minus (#) sign denotes electrons are being donated (alkaline), and the plus (þ) sign denotes electrons are being taken (acidic). A Slightly Alkaline Environment Is More Beneficial. For example, a free radical is a molecule with missing electrons, and an antioxidant is a molecule donating electrons.

Health is maintained with vital immune function and cell regeneration.

A voltage of #50 mV is required for regenerating cells.

Dr Jerry Tennant, MD, reports that a #50 mV energy state is necessary for maintaining good health, and #70 mV is optimal.

Without this balanced Voltage Potential, aging and chronic disease occurs.

This baseline can be achieved through healthy diet and keeping the body's subtle energy balanced. Cells contain a process for turning fatty acids into glucose.

They are processed through a series of chemical reactions known as the Krebs cycle. The Pathway From The Physical Body through the hormones to the psychological and emotional body Is Through The Endocrine System.

The major glands of the Endocrine System are the hypothalamus, pituitary, thyroid, parathyroid, adrenal, pineal, and reproductive organs (generatives).

The pituitary cells are neuronlike; they express numerous voltage-gated sodium (Naþ), calcium (Ca2þ), potassium (Kþ), and chloride (Cl#) channels, and fire action potentials spontaneously, accompanied by a rise in intracellular Ca2þ.

In some cells, Spontaneous Electrical Activity Is Sufficient to drive the intracellular Ca2þ concentration above the threshold for stimulus-secretion and stimulus transcription coupling. In other cells, the function of these action potentials is to maintain the cells in a responsive state with cytosolic Ca2þ near, but below, the threshold level. Some pituitary cells also express gap junction channels, which could be used for intercellular Ca2þ signaling in these cells.

Endocrine cells also express extracellular ligand-gated ion channels, and their activation by hypothalamic and intrapituitary hormones leads to amplification of the pace-making activity and facilitation of Ca2þ influx and hormone release.

These cells also express numerous G protein-coupled receptors, which can stimulate or silence Electrical Activity and action potential-dependent Ca2þ influx and hormone release.

Other members of this receptor family can activate Ca2þ channels in the endoplasmic reticulum, leading to a cell type-specific modulation of Electrical Activity. These Same Physics Phenomena Are Seen In The other Glands of the Endocrine System. Once energy reaches a certain threshold, molecules begin to vibrate (resonate) in unison until they reach a level of coherence.

The moment molecules reach this state of coherence, they take on certain qualities of quantum mechanics, including nonlocality, where they operate in tandem.

This occurs in ion flux where the selectivity filter of ion channels exhibits quantum coherence, which is relevant for the process of ion selectivity and conduction; endocrine hormone secretion, where highly organized timing of Circadian Rhythms and daily control of hormone secretion achieves optimal biological functioning in health.

The Healing of a Patient must include more than the biology and chemistry of their physical body; by necessity, it must include the: Mental, Emotional, and Spiritual (energetic) aspects." - in "Energy Medicine: Current Status and Future Perspectives", Global Advances in Health and Medicine, 2019.

The Warburg Effect

> ***"The current study demonstrates that Near-Infrared Light inhibits proliferation in cancer cells but not in non-cancer cell. The proposed general mechanism, partially detailed in the literature of Photobiomodulation Action, Appears to Involve an Increase of Reactive Oxygen Species (oxygen-containing molecules that easily react with other components within a cell) production, which our data seem to confirm, and thus, could be operative in this senescence mode. This Mechanism Takes Into Consideration The Warburg Effect, where Cancer Cells Have A Greater Shift Towards Glycolysis (Glycolysis is the foundational metabolic pathway that breaks down glucose ($C_6H_{12}O_6$) into two molecules of pyruvate, generating energy in the form of Adenosine Triphosphate (ATP the primary energy currency of biological cells), and Nicotinamide Adenine Dinucleotide (NADH a coenzyme central to metabolism, found in all living cells. Nicotinamide Adenine Dinucleotide + Hydrogen, is the biologically active, reduced coenzyme form of vitamin B3 [niacin], found naturally in all living cells, it plays a fundamental role in cellular respiration, where it acts as an electron donor to generate energy Adenosine Triphosphate (ATP). Occurring in the cell's cytoplasm, it is the first stage of both aerobic and anaerobic respiration and functions without requiring oxygen), Leading to Increased Reactive Oxygen Species levels. The combination of the already elevated Reactive Oxygen Species levels in cancer cells and Photobiomodulation-induced Reactive Oxygen Species increase activates a signal cascade towards senescence and permanent cell cycle arrest as a stress response. This mitochondrial/Reactive Oxygen Species-based mechanism would support the well-described anti-inflammatory and wound-healing properties observed with Photobiomodulation."*** *- in "Selective induction of senescence in cancer cells through near-infrared light treatment via mitochondrial modulation", 21 June 2024.*

The Natural Interaction Between Living Matter And Photons

"Biophysicists have now shown that: There Exists A Crucial Natural Interaction Between Living Matter And Photons. This process is measurable at the cellular (bacterium) level. Other research has demonstrated that living systems are extraordinarily sensitive to extremely low-energy electromagnetic waves. This is to say, each kind of cell or microorganism has a specific frequency of interaction with the electromagnetic spectrum. In the 1870's, Dr Antoine Bechamp, MD, saw tiny motile bodies with his microscope which he named "microzymas." In the first third of the 20 century Dr Gunther Enderlein,

MD, Microbiologist, Researcher and Physician, saw these bodies and called them “endobionts.” Dr Wilhelm Reich, MD, in the late 1930's, saw a similar if not identical body which he named “bion.” There were others during this era.

Today in Sweden and in Canada the properties of these same living particles are being explored by researchers who have assigned names from their own imaginations. The various theories advanced by members of this group of researchers remain rejected or largely forgotten. Remarkably, they all used dark-field condensers, a known but uncommon practice.” - in “The Cancer Cure That Worked”, 1987.

Teeth and Your Health

“Rejuvenation is about attaining and maintaining superior health, and one important part of that process is removing toxins (that is, poisons) from our bodies. Dr Jerry Tennant, was among the first researchers to make links between the health of the teeth and the health of other organs in the body.

He points out that now all of medicine is beginning to recognize the Effects of Dental Infections on the Rest of the Body. However, few physicians know that Every Tooth Is Wired into an Acupuncture Meridian, and whatever happens to each tooth will affect its Meridian.

For example, the lower left molars, teeth 17, 18, 19 on the standard Tooth numbering chart, have Direct Relationships to:

- Sinuses.
- Lungs.
- Large Intestines (Colon).
- Heart.
- Circulatory System.

Dental Health and Whole Body Health

There are critical issues about Dental Health and Whole Body Health.

Infections in Teeth (which we call decay), cause canals and the bone around teeth to put out poisons called Gliotoxins (Mycotoxin: specifically an epipolythiodioxopiperazine, produced by various fungi, notably Aspergillus fumigatus), and Thioethers (Sulfides) that affect the meridian of the infection.

Further, some Dental Surgery Amalgam Materials are often Toxic.

Mercury (for example): is one of the Most Poisonous substances known.

Nickel: common in Crowns and Braces, is Toxic to the Brain.

And these Substances Continue to be used in Dental Practices.

In terms of Dental health, Dr Tennant makes the case that Root Canals are Dead Tissue; and Dead Tissue Always Gets Infected, and is to be Avoided.

Further, it's not unusual to find mixed metals in the mouth, for example:

1. Mercury
2. Silver
3. Gold

Extensive Research shows that the: Electro-Magnetic frequency of metals differs from that of a Healthy Human Frequency; and Mixed Metals in an Acid or Alkaline Solution Create what is in simple terms a Battery Effect.

The Consequence is a Chemical Reaction in the mouth, that may be Linked to Deterioration of Health.

An Electrical System

> ***"If you take a quartz crystal and squeeze it with a pair of pliers, it will emit electrons. This is called the "piezoelectric effect." Our muscles are Piezoelectric Crystals. Thus when we exercise, our muscles create electrons. The muscles are also rechargeable batteries. Thus the movement of our muscles re-charges our muscle batteries. Exercise is a major way the body acquires electrons. There is a pump within the skull and down the spine called the Craniosacral Pump. Each time this pump activates, it sends a surge of electrons through the body."*** *- Dr Jerry L. Tennant MD, in "Healing is Voltage", 2014.*

Dr Tennant in his writings makes a strong case that the Body can be best understood (and treated): As An Electrical System. He shares interest with other researchers and practitioners in the pH of the body: which is shorthand for potential for hydrogen ion concentration. It is a way of talking about the amount of acid and base in our bodies. And Dr Tennant points out it is also a way of talking about the amount of voltage in our body. There is a growing consensus that healing of chronic illness takes place only when and if the blood is restored to A Normal, Slightly Alkaline pH, which is about 7.3 on a scale of 0 to 14 where 0 is the most acidic and 14 is the most alkaline. Chronic Disease and Pain Are Almost Always Associated with an Acidic pH which, in Dr Tennant's view, is the same as saying it is almost always associated with a loss of voltage.

Measurement of salivary pH gives a good indication of cellular pH; and of how much voltage is stored in your cellular batteries. Dr Tennant and other experts agree it should never be lower than 6.5. Testing with readily available pH strips is an excellent way to learn exactly the state of your acidic-alkaline balance at any point in time." - Dr Michael Willock, DDS, in "Key to Rejuvenation: Balance pH", Health & Healing in the Triangle, 2010.

Excessive Acidity of Nerves is Responsible for a Host of Serious Ailments

"Excessive Acidity of the Nerves May be Responsible for a Host of Serious Ailments; was pointed out by Dr Robert Gesell, MD, Neurophysiologist, Chairman of the University of Michigan's Department of Physiology since 1923.

The Acid Nerve Condition which may be responsible for pilot failure in high-altitude flying without oxygen can not be counteracted by the Soda Bicarbonate or other alkaline powders which the layman takes for his so-called acid stomach. Excessive alkalinity of the nerves may cause just as much trouble as excessive acidity. The degree of acidity or alkalinity of nerves that makes the difference between health and serious illness is actually rather small. But the shift from just the proper balance to excessive acidity or alkalinity of the nerves may influence all body processes, including breathing, heart action and digestion." - in "Fed. Am. Societies Experimental Biology", Science, 10 April 1942.

Without Water, Death Occurs Quickly

"Without Water, Death occurs quickly. A human, can go without Water for 3 Days. Many patients who are dehydrated get confused. To ameliorate confusion, they may be prescribed (Medical Trade) Sedatives. When a patient is sedated, they cannot access or ask for a drink. As a person gets too drowsy to drink, fluids may be discontinued and the patient is diagnosed as "imminently dying". Many are dying because they are being neglected, not because they are terminally ill. Something as simple as a glass of Water may save their life. Our most vulnerable members of society are being denied access to water and are literally dying of thirst. "A Review of the Literature on Dehydration in the institutionalized elderly" (e-SPEN, the European e-Journal of Clinical Nutrition and Metabolism 2010), has shown that 31% of patients in long-time care, were dehydrated.

> ***"A total of 200 participants were recruited at admission to hospital, 37% of whom were dehydrated. Of those dehydrated, 62% were still dehydrated when reviewed at 48 h after admission. Overall, 14 (7%) participants died in hospital, 11 (79%) of whom were dehydrated at admission (P = 0.001). The 30-day mortality was greater in those dehydrated at admission than in those who were euhydrated [11 (16%) versus 5 (4%) (P = 0.01)]."*** *- in "Hydration and outcome in older patients admitted to hospital", Age Ageing, August 2015.*

Patients who are dehydrated are 6 times more likely to die in hospital that those who are not dehydrated.” - in “Dying of Thirst”, UK Column, 27 February 2024.

The Clinical Practice of Emunctology

“The Cure of Disease, the Relief of Pain, the Restoration of Health”

These Embody the Object of Emunctology Clinical Practice. It is, thus, of the Utmost Importance, to understand the following, in regards to the Treatment of All Organic, so-called “Diseases”. The Emunctologist should know that the person in a State of Emergency, from Ill Health - in the majority of these cases - there is a State of Acidity in the Bloodstream of such individuals. Thus, the first thing, is to give to the person 1 (one) teaspoonful of Bicarbonate of Soda, in a 250ml glass of Still Water. Normally, these individuals, are also Dehydrated, lacking enough Water in their system, and with Low Levels of Salt. Thus, ½ (half) teaspoon of Sea Salt, should be given to these individuals, along with a bottle of 2 litres of Still Water, for the individual to drink during the next 24 hours.

Emunctology Method of Treatment

The Following Are the 9 Therapeutic Agencies, Which Constitute and Are The Most Useful Scientific Healing Methods, that Encompass Well Established Physiological Principles of Treatment, that are Required by the Body to Recover its Homeostasis (~), and Health:

1 - The Cleansing of the Liver.
2 - The Cleansing of the Colon.
3 - The Removal of All Foci of Infection.
4 - Proper Food Choices.
5 - The Adequate Vitamin and Mineral Supplementation to the Diet.
6 - The Need of Osteopathic Manipulations.
7 - The Need of Chiropractic Adjustments.
8 – The Understanding; that there is a Mind, even a Soul, behind the face of each Individual.
9 - To Apply Correctly All the Knowledge Received at the School of Health in Emunctology.

(~) The State of Steady Internal Physical, and Chemical Balance Maintained by All Living Systems.

The Importance of Homeostasis

The Importance of Homeostasis cannot be overemphasized; it was recognized early by Claude Bernard (1813–1873), Founder of Experimental Physiology.

> ***"The internal environment is constant in warm blooded organisms, and the physiological mechanism resists any external factor which alters the internal state."***

"The constant conditions which are maintained in the body might be termed Equilibria. That word, however, has come to have fairly exact meaning as applied to relatively simple physico-chemical states, in closed systems, where Known Forces are Balanced. The Coordinated Physiological Processes which maintain most of the steady states in the organism, are so complex, and so peculiar to living beings, involving, the: Brain, Nerves, Heart, Lungs, Kidneys, Spleen. All Working Cooperatively. I Have Suggested A Special Designation For These States: Homeostasis. The word does not imply something set and immobile, a stagnation, It Means A Condition: A Condition which may vary, but which Is Relatively Constant. It seems not impossible that the means employed by the more highly evolved animals for Preserving Uniform and Stable their Internal Economy (i.e. for preserving Homeostasis), may present some general principles for the establishment, Regulation and Control of Steady States, that would be suggestive for other kinds of organization (even social and industrial), which suffer from distressing perturbations.

A Comparative Study would Show that Every Complex Organization Must Have more or less Effective Self-Righting Adjustments in order to Prevent a Check on its Functions, or a rapid disintegration of its parts when it is subjected to stress. If there is need for Salt in the Body, as there may be, reports are on record that such animals travel long distances to "salt licks" to satisfy their "hunger." The type of homeostatic arrangement which keeps constant the salt level in the blood appears to be the same as that of water. "Salt hunger" may be analogous to thirst as a means of meeting the gross requirements of the organism. In practically all respects The Control of Water, and The Control of Salt Are Alike, and it is probable that They Usually Run Parallel.

The Homeostasis of Body Temperature, like that of the Oxygen Supply to the tissues, is achieved by modifying the speed of a continuous process.

There is little doubt that the mechanisms of Homeostasis belong to the general category of Protective Functions. Homeostasis; If Not Guarded Against, Profound Disorders May Result." - in "The Wisdom of the Body", 1932.

Glands, Blood And Secretions

“The physician at the Court of Louis the Fifteenth, Théophile de Bordeu.

Of him, Garrison writes: “It was his ambition to confirm and uphold the humoral pathology of Hippocrates, and he regarded the three Hippocratic stages of disease, irritation, coction, and crisis as dependent upon the glandular and other secretions. Bordeu’s reputation today is concentered in a single idea; the doctrine that not only each gland, but each organ of the body, is the workshop of a specific substance or secretion which passes into the blood and that upon these secretions the physiological integration of the body as a whole depends.

To its effect upon the blood and thence, through the corresponding effect of such blood, upon the entire organism.” The body is possessed of a variety of structures that in function amount to chemical laboratories. These are the glands such as those which secrete saliva in the mouth or tears to moisten the eyes.

The Glands remove from the blood that courses through them particular substances that go to make up their Secretions. The tears are merely so much salt water drained as such from the blood. Numerous glands, however, not only abstract from the circulation raw materials but further elaborate them into chemical substances with unique properties.

Ductless Glands

Most glands have ducts through which their secretions are discharged. Another type, however, formerly often referred to as the “Ductless Glands,” dispose of their products directly into the blood stream. These products for the most part constitute the hormones. Insulin, which is produced in the digestive gland, the pancreas. The organs now known to produce hormones are the pituitary, the thyroid, the parathyroids, the adrenals, the pancreas, the stomach and intestines, the ovaries and the testes. Other organs probably or possibly having endocrine functions are the pineal, the thymus, the liver, the heart and the spleen.

The Hormones

The Hormones may be formally defined as substances produced in one part of the body and distributed by the blood or the lymph to other parts, the structures or functions of which are thereby modified. The hormones include a special group of chemical substances that play an important role in the regulation of numerous bodily functions.

The term “hormone” is derived from the Greek “hormao,” which means “I excite.” The term, however, is in a measure a misnomer in that the internal secretions may either increase or decrease bodily activities.

The fundamental functions such as digestion or growth even in the higher animals are primarily under hormone control. Reproduction with its numerous bodily and psychic adaptations is likewise strikingly dependent upon hormone factors. These facts suggest that chemical control and, in the higher animals, specific hormone control. Hormones for the most part are fairly simple chemical substances. Several have been identified as crystalline bodies.

They are astonishingly potent. Adrenine, for example, introduced directly into the blood stream exerts a definitely appreciable effect when its concentration has reached only one part in four hundred millions.

Professor Abel, Johns Hopkins University, has isolated a substance from the pituitary gland so potent that 5,000 miles of such carts would be required to reduce 1 ounce to the undetectable point. Thyroxine, the hormone of the thyroid gland, is so potent that one-thirtieth of a grain is sufficient; temporarily to increase the oxidation processes of the adult human body by 1%.

Thus, one grain would roughly cause any of us to live a third faster than we should in complete absence of the thyroid gland.

It has been estimated by what we do and are. In the present they cooperate in determining the forms of our bodies and the working of our minds.” - in “The Tides of Life: The Endocrine Glands in Bodily Adjustment”, 1933.

The Interplay Between the Psyche and the Endocrine System

“The corresponding practical goal is to be able to correctly determine the differential indications for psychoanalysis versus hormonal therapy.

It remains surprising, for instance, to encounter a case of impotence in a young man; where psychoanalysis was given the phobic mechanism underlying the condition; but where a co-existing hearing impairment so severely hindered the analysis that the advice to first attempt a course of hormonal treatment was followed, yielding rapid and lasting success.

In other instances, a correctly indicated hormonal treatment improves the prospects for the subsequent analysis.

The analyst, should acquire fundamental knowledge of this field, where the economics of drive life and affective states play out.

Freud himself advocated attempting to combine psychoanalysis and hormonal treatment in appropriate cases; he personally fulfilled his own earlier admonition that psychoanalysis must secure its findings before endocrinology discovered a biological, causal therapy.

These cases involve, firstly, those where an abnormal drive constitution can be demonstrated; secondly, those involving chronic or periodic "reservoir" discharges; and thirdly, those characterized by a persistent reduction in the excitability of entire functional systems. While these organically determined abnormalities are certainly subject to psychological influence, psychoanalysis is nonetheless greatly complicated by them, as excessive resistances or an excess of acting-out repeatedly disrupt the analytic process, or conversely a state of torpor causes it to flag. In the final chapter, Hoskins rightly states that **"Endocrine Abnormalities in the years preceding puberty leave a lifelong mark on the individual**"; in such cases, would not timely endocrine therapy; already frequently practiced today; facilitate psychoanalysis? The same applies to later stages of life, and not merely to periods of developmental crisis, for **"in all manifestations of life; whether of a sensory-physical, sexual, or psychological nature; we are highly dependent on the functions of the Endocrine Glands."**

The book is highly recommended; it informs the reader, while offering food for thought to the knowledgeable one." - P. Federn, Vienna, in "R. G. Hoskins, Director of Endocrine Research in the Medical School of Harvard Universit: "Die Hormone" [The Hormones]. Translated and adapted into German by Wolf v. Drigalski. Felix Meiner Verlag, Leipzig, 1934. (The American original, "The Tides of Life: The Endocrine Glands in Bodily Adjustment", 1933)", Internationale Zeitschrift für Psychoanalyse, XXII, Band, Heft 3, 1936.

The Endocannabinoid Network

"The Endocannabinoid Network is activated by stressful circumstances, such as Pain, and Anxiety, to Induce Sedation.
It also stimulates Appetite in an attempt to Relieve the sensation of Hunger.

In addition, the Endocannabinoid Network is involved in:

1. **Neuroprotection.**
2. **Nociception Modulation.**
3. **Motor activity regulation.**
4. **Memory Processing.**

The Endocannabinoid Network is a Physiologic System of paramount Metabolic and Neurophysiologic Importance. And its hyperactivity appears to play an important role in the accumulation of visceral fat and the development of obesity and the Cardiometabolic Syndrome. From a structural standpoint, Endocannabinoids derive from phospholipidic precursors on the cellular membrane and are synthesized from arachidonic acid, an essential fatty acid belonging to the Ω-6 family. The most extensively studied cannabinoids currently are arachidonyl-ethanol-amide (anandamide) and arachidonyl glycerol. These 2 molecules bind to specific receptors located in areas of the hypothalamus functionally related to regulation of behavior. On completion of their physiologic actions, they are almost immediately degraded by a tightly regulated enzymatic network. **The Endocannabinoid Network should be considered not only as a central neuromodulator, but also as a regulator of multiple metabolic steps influencing the Neuroendocrine and Metabolic Systems. The mechanisms of actions of Endocannabinoids that reach far beyond Central Nervous System effects over appetite and affect Global Energy Homeostasis. Knowledge about these features and actions yet to be uncovered about physiologic actions of Endocannabinoids will likely lead to the synthesis of compounds with highly selective characteristics that will improve the management of obesity, Cardiometabolic Syndrome, and other conditions affecting the Central Nervous System and Endocrine Systems."** - in **"The Endocannabinoid Network: Insight Into the Regulation of the Neuroendocrine and Metabolic Systems",** The Journal of Cardiometabolic Syndrome, Winter 2007.

Cannabis Sativa And The Body's Endocannabinoid Network

"Cannabis interacts with the Endocannabinoid Network a Physiologic System, is the Body's Natural system to Maintain Homeostasis. For thousands of years, humans have cultivated Cannabis for its fiber, seeds, and medicinal properties. Ancient Hindu texts claim it was brought by Shiva for the pleasure of humanity. The plant contains over 400 Chemicals, including Cannabinoids, which are most abundant in the resin glands of budding female plants.

In the 1960s, THC (Delta-9-TetraHydroCannabinol, is the main psychoactive compound in Cannabis) was isolated, the psychoactive cannabinoid that makes users feel high. The discovery launched a new chapter in Neuroscience.

The Plant Cannabis Sativa opened a window into the functioning of our body, completely unexpected window. Because what was discovered was that THC binds to receptors in the brain and outside the brain, and when it does so, when it binds to these receptors, the cells now behave differently.

Cannabinoid Receptors (named after Cannabis):

Are Found on Nearly Every Organ In The Body.

They bind with our own cannabis-like molecules, called Endocannabinoids, which Regulate Runctions like:

1. Sleep.
2. Cognition.
3. Memory.
4. Mood.

Unlike other brain chemicals, they travel backwards, across the synapse, where they control the release of most neurotransmitters. One of the most amazing things that happened was the discovery of the Endocannabinoid System: Every Mammal Has One, and this is a system of chemicals and receptors throughout the Brain and Body. And really the primary goal of the Endocannabinoid System is Homeostasis, keeping things in balance.

A key role of the Endocannabinoid system is to manage stress. In fact, the first Endocannabinoid found in our body was given a Sanskrit name, anandamide, meaning "bliss." In response to stress, our body mobilizes an Endocannabinoid signal. And so, if something aversive happens to us and we suddenly see a threat in front of us, our body kind of goes into a high alert mode and we shoot up.

Once we've been removed from that threat, though, our body needs to turn that stress response back off. And what we have learned is that this burst of Endocannabinoids that occurs in response to stress is really critical for that recovery phase." - in "The Cannabis Question", NOVA Learning, PBS, 2021.

> ***"Endocannabinoid System (ECS), is critical for almost every aspect of our moment-to-moment functioning, it regulates and controls many of our most critical bodily functions: learning and memory, emotional processing, sleep, temperature control, pain control, inflammatory, immune responses, eating. The ECS comprises a vast network of chemical signals and cellular receptors that are densely packed throughout our brains and bodies. The "cannabinoid" receptors in the brain (CB1 receptors) outnumber many of the other receptor types on the brain. They act like traffic cops to control the levels and activity of most of the other neurotransmitters. To stimulate these receptors, the body produce molecules called Endocannabinoids, which have a structural similarity to molecules in the Cannabis Plant. A Second type of cannabinoid receptor (CB2 receptor), exists mostly in our immune tissues and is critical to helping control our immune functioning, and it plays a role in: modulating intestinal inflammation, contraction, and pain in inflammatory bowel conditions."*** *- in "The Endocannabinoid System: Essential and mysterious", Harvard Health, 11 August 2021.*

> ***"The Endocannabinoid System (ECS) is a widespread Neuromodulatory Network Involved both in the Developing Central Nervous System, as well as Playing a Major role in tuning many cognitive and physiological processes. The ECS is composed of endogenous cannabinoids, cannabinoid receptors and the enzymes responsible for the synthesis and degradation of Endocannabinoids. Narrowly defined, endogenous cannabinoids (Endocannabinoids, eCBs) are signaling lipids that activate cannabinoid receptors. ECS is present from the earliest stage of pregnancy, in the preimplantation embryo and uterus, placenta and in the developing fetal brain. [Cannabinoid Receptor Type 1 (CB1Rs), are proteins found in the brain and Central Nervous System that detect cannabinoids, including those from Cannabis and the body's own endocannabinoids. They are a key part of the Endocannabinoid system, and Play a Crucial Role in Regulating Neurotransmitters, and Functions like: Mood, Appetite, Pain, and Memory]. In human fetal brains, CB1Rs can be detected at week 14 of gestation, with preferential expression in the cerebral cortex, hippocampus, caudate nucleus, putamen and cerebellar cortex, mirroring their adult distribution."*** *- in "Review of the Endocannabinoid System", Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, June 2021.*

The Equilibrium Of The Body

For the Body System, Equilibrium is Fundamental, especially, in those elements as are necessary to create a normal equilibrium in the body system, for the general equilibrium is necessary for a normal functioning organism.

Does draft cause a cold?

Does unusual change in dress?

Does change in temperature?

Does getting the clothes or the feet damp? , Etc...

All of These, to be sure, Affect the Circulation; by the depletion of the Body Balance, the Body Temperature, or Body Equilibrium.

Then, at such times when a body is Tired, worn, Over-Acid or Over-Alkaline, it is More Susceptible to Cold, even by the very changes produced through the Sudden Unbalancing of Circulation, As From a Warm Room Overheated. Naturally when Overheated there is Less Oxygen, which Weakens the Circulation in the life-giving forces that Are Destructive to Any germ, or contagion, or such. As is known, All Vital Forces are activities of the Glandular System; and these are stimulated by specific glandular activity attributed to the functioning of certain portions of the system.

> *"Pearl, has pointed out that* ***if all the ordinary causes of premature death were eliminated, this would increase the average duration of life. It is evident, then, that if Longevity is our goal, It Is Not Medical Science we must look to. Only to Search Out, and Study the Secrets of Nature, by way of experiment can we hope to attain to a comprehension of "the wisdom of the body and of the understanding of the heart", and thereby; to the mastery of disease and pain, which will enable us to relieve the burden of Mankind."*** *- Prof. E.H. Starling, FRS, in "Hormones", Nature, 1 December 1923.*

The Seat of the Mind

"Could we look at the question of a **seat for the mind within the body.**

Can we attach any meaning to the fact that it is localized in the nervous system? The nervous system has had the special office from its earliest appearance onward throughout evolutionary history more and more to weld together the body's component parts into one consolidated mechanism reacting as a unity to the changeful world about it. **More than any other system it has constructed an individual of unified act, and experience.** In that system mind, as we know it, has had its origin.

The cortex of the forebrain is the seat of mind.

From small beginnings it has become steadily a larger and larger feature of the nervous system until in adult man the whole of the rest of the system is relatively dwarfed by it. **The mental attributes of the nervous system are the coping-stone of the construction of the individual.** But they do not stop at the individual; they proceed beyond the individual; they integrate from individuals to communities. When we review the distribution of mind within the range of animal forms, we meet with two peaks of development - one in insect life, the other in the vertebrate, with its acme finally in man. In the insect the type of mind is not rational but instinctive, whereas in man there is reason as well as instinct.

Yet in both one outcome seems to be the welding of individuals into societies on a scale of organization otherwise unattained.

The greatest social animal is man; the powers that make him so are mental.

The Living Creature Is Fundamentally a Unity.

In trying to make the how of an animal existence intelligible to our imperfect knowledge we have to separate its whole into part-aspects and part-mechanisms, but that separation is artificial. **Can we suppose a unified entity which is part mechanism and part not?** One privilege open to the human intellect is to attempt to comprehend, not leaving out of account any of its properties, **the how of The Living Creature As A Whole. In the biological synthesis of the individual it regards mind.** It includes examination of man himself as acting under a biological trend and process which is combining individuals into a **multi-individual organization.** For this biological trend and process is constructing a social organism whose cohesion depends mainly on a property developed so specifically in man as to be, broadly speaking, his alone - namely a mind actuated by instincts, but instrumented with reason.

“Man, often Nature’s rebel”, as Sir Ray Lankester has luminously said, can, viewing this great supra-individual process, shape even as individual his course conformably with it, feeling that in this instance to rebel would be to sink lower rather than to continue his own evolution upward.” - in “Sherrington, his life and thought”, 1979.

> ***“Mind does not seem to attach to life, however complex, where there is no nervous system, nor even where that system, though present, is quite scantily developed. Mind becomes more recognizable the more developed the nerve system. Hence the difficulty of the twilight emergence of mind from no mind, which is repeated even in the individual life history. The so-to-say mental portion of the system is placed so that its commerce with the body and the external world occurs only through the archaic non-***

> ***mental rest of the system. To pass from a nerve impulse to a psychical event, a sense-impression, percept, or emotion is, as it were, to step from one world to another and incommensurable one."*** *- Prof. Dr Charles Scott Sherrington, MD, in "Some Aspects of Animal Mechanism", Science, 29 September 1922.*

Prof Dr Charles Scott Sherrington, MD, was a Neurophysiologist, his Research E**stablished the Concept of the Spinal Reflex as a system involving connected neurons "the neuron doctrine", and the ways in which signal transmission between neurons can be potentiated or depotentiated**. The Book "The Integrative Action of the Nervous System", 1906, is a synthesis of this work, in recognition was awarded the Nobel Prize in Physiology or Medicine in 1932.

> ***"Meditate often on the Interconnectedness and Mutual Interdependence of all things in the universe. For in a sense, All Things Are Mutually Woven Together, and therefore Have An Affinity for Each Other; for One Thing Follows After Another According to their Tension of Movement, their Sympathetic Stirrings, and The Unity of All Substance."*** *- Marcus Aurelius, Roman Emperor, in "Meditations" 6.38, 121–180 AD.*

> ***There are physical contacts in thy own Body with thy own Soul, thy own Mind.***

Is The Mind Merely a Function of the Brain?
Or is it a Separate But Closely Related Element?

> ***"Mind, meaning by that thoughts, memory, feelings, reasoning, and so on, is difficult to bring into a class of physical things." - Sir Charles Sherrington***

Can the Brain Explain the Man?
Can the brain achieve by neuronal action all that the mind accomplishes?

> ***"To consciousness the brain is messenger. The brain is the interpreter of consciousness." - Hippocrates of Kos***

"Throughout my own scientific career I, like other scientists, have struggled to prove that the brain accounts for the mind. But perhaps the time has come when we may profitably consider the evidence as it stands, and ask the question:

Can the mind be explained by what is now known about the brain?

> ***"Starting with the physical hypothesis (accepted by all scientists as a belief in order to gain knowledge): that the physical attributes of man and energy alone are what they can deal with. But there are discoveries made that does not fit into the scientific picture. It is the testimony of living, conscious patients. This is an objective item in your scientific evidence. How can it be fitted into the assumed hypothesis of an entirely physical nature of man? I belief that mind has a being distinct from body, though intimately related to and dependent on body. Mind is a very distinctive reality. The consciousness of man, the mind, is something not to be reduced to brain-mechanism." - Charles W. Hendel, Professor of Moral Philosophy and Metaphysics, Emeritus, Yale University; Director, Montreal Neurological Institute; William Cone Professor of Neurosurgery, McGill University.***

I reconsider the present-day neurophysiological evidence on the basis of 2 hypotheses:

1. **That Man's Being Consists of 1 Fundamental Element.**
2. **That Man's Being Consists of 2 Fundamental Elements.**

I conclude that there is no good evidence, that the Brain alone can carry out the work that the Mind does; and that it is easier to rationalize man's being on the basis of 2 elements than on the basis of 1. The mind must be viewed as a basic element in itself. One might call it a medium, an essence, a soma. That is to say, it has a continuing existence. The Brain is the vastly complicated master organ with-in the body that makes thought and consciousness possible. An individual brain-mechanism is a functional unit that plays a somewhat specialized role in the total integrative action of the brain. Each Nerve Cell, or Neurone, is capable of developing its own Electrical Charge. Each has one branch called the Axone, among its many branches. The Axone carries a current of neuronal impulses outward, away from the cell, to other cells. The arriving impulses stimulate each target cell to flash the message onward, or they check activity in the target cell producing inhibition of cell activity. The cell bodies are collected together, forming islands, or blankets of gray matter. The branching connections form the white matter. This whole system vibrates, one might say, with an energy that is normally held in disciplined control, like that of a vast symphony orchestra, while millions of messages flash back and forth, to as many functional targets. However, when some abnormality presents itself within the skull, and becomes a chronic abnormality that irritates the gray matter, it forms a focus of irritation and may cause a recurring disorderly

explosion of energy involving many cells at once, like lightning from a miniature thunder cloud. Each time this happens, an epileptic fit comes.

The attack varies in outward character according to the function of the gray matter in which the discharge takes place. If it occurs in the cells of the gray matter that forms a part of one of the sensory circuits, a sensation is felt; if it occurs in cells of the motor system, movement follows. Physicians, whose task it is to deal with the whole man, take a unique view of him.

They have learned, to: "Treat the Mind as well as the Body."

They are well aware that Body (Brain), and Mind make up the child.

They develop together and yet they seem to remain apart as the years pass.

These in a sort of ontogenetic symbiosis, go through life together." - Dr Wilder Penfield, Brain Surgeon, in "The Mystery of the Mind", 1975.

> ***"The days of our years are 70; and if by reason of strength they be 80, yet is their strength labour and sorrow; for it is soon cut off, and we fly away. Who knoweth the power of thine anger? even according to thy fear, so is thy wrath. So teach us to number our days, that we may apply our hearts unto wisdom."*** *- Psalm 90:10-12*

The Mental Attributes of the Nervous System

"The mental attributes of the nervous system would be, then, the coping-stone of the construction of the individual. Great differences of difficulty therefore confront our understanding of various aspects of animal life.

The Living Creature Is Fundamentally A Unity

In trying to make the how of animal existence intelligible to our imperfect knowledge we have for purposes of study to separate its whole into part aspects or part mechanisms but that separation is artificial. **It is as a whole or single entity that the animal or for that matter the plant is finally and essentially to be envisaged. We cannot really understand one part without the other. Can we suppose a unified entity which is part mechanism and part not?** One privilege open to the human intellect is to attempt to comprehend, not leaving out of account any of its properties, the "how" of **The Living Creature As A Whole.** The problem is ambitious, but its importance and its reward are all the greater if we seize and attempt the full width of its scope." - Prof. Dr Charles Scott Sherrington, MD, in "Some Aspects of Animal Mechanism", Science, 29 September 1922.

The Nervous System Is Regarded As A Whole Inclusive of The Mind

"The Treatment of Nervous and Mental Diseases, with advances in the knowledge of Neurology and Psychiatry. The Nervous System Is Regarded as a Whole; and as Inclusive of the Mind, and it is maintained that disturbances of any and all of its functions, mental as well as physical, are proper subjects for therapeutics. The word "insanity" should be eliminated from a 20th century work on medicine. It is a relic of that time when all Brain Disorders, with predominant Mental Symptoms, were considered as one disease. It has no place in the present order of things; certainly not in medicine, and probably better not in law.

Psychical And Physical

The present work lays emphasis upon the Psychical side of life; as being worth quite as much consideration as the Physical. It sets forth doctrines of Nervous, and Mental Hygiene, reconstructive factors in social organization as applied to human ills, and endeavours to present a broad front to the pessimistic nihilism in therapeutics that has been too long current in these fields, because the [Medical Trade] doctors eyes have been too closely focussed on the individual examples and result of human accidents." - in "The Modern Treatment of Nervous and Menial Diseases", 1913.

We Discern The Power of Truth And Love To Heal The Sick

"The true knowledge of God; as imparting the only power to heal the sick and the sinner, we shall demonstrate in our lives the power of Truth and Love.

Divine Science, brought to the understanding through Christ, the Spirit-revelator, is man healed and saved. No opinions of mortals nor human hypotheses enter this line of thought or action. Drugs, inert matter, never are needed to aid spiritual power. The Principle of all cure is God, unerring and immortal Mind. The tendency of Mental Healing is to uplift mankind. Thought imbued with purity, Truth, and Love, instructed in the Science of metaphysical healing, is the most potent and desirable remedial agent on the earth.

All Science is Christian Science; the Science of the Mind that is God, and of the universe as His idea, and their relation to each other. Its only power to heal is its power to do good." - Mary Baker Eddy in "Miscellaneous Writings", 1896.

The Inadequacy of Separatist Principles

"But if there is a radically distinct intellectual power of force in man, is such a distinction of kind so isolated a fact as many suppose?

May there not exist between the forces which living beings exhibit other differences of kind?

Each living being consists of an aggregation of parts and functional activities which are evidently knit together into a unity.

Each is somehow the seat or theatre of some unifying power or condition which synthesises their varied activities, and is a principle of individuation.

To me it seems that we must admit the existence of such a living principle.

We may analyse the activities of any animal or plant, and by consideration of them separately find resemblances between them and mere physical forces.

But the synthesis of such forces as we find in a living creature is certainly nowhere to be met with in the inorganic world.

This seems certainly to have been the opinion of Buffon, and it is to this opinion that I referred in speaking of the fourth cause to which he attributed the changes in organic forms.

And to me it seems that we must admit the existence of such a living principle.

To deny this would be to deny the plainest evidence of our senses.

To assert that each living body is made up of minute independent organisms, each with its own "principle of individuation", and without subordination or co-ordination, is but to multiply difficulties, while such a doctrine conflicts with the evidence of our own perceptions, which lead each of us to regard himself as one whole — a true rarity in multiplicity.

The existence in each creature of a peculiar, co-ordinating, polar force, seems to be specially pointed to by the phenomena of serial and bilateral symmetry, by the symmetrical character of certain diseases, by the phenomena of monstrous growths and by the symmetrical beauty of such organisms as the Radiolarian Rhizopods. It also seems to me to be made evident, by the various activities of each animal, which are, as a fact, grouped in one in mutual interaction — an organism having been described by Kant as a creature, the various parts of which are reciprocally ends and means.

The "Vitalism" which is so reasonably objected to, is that which supposes the existence in each living creature of some separate entity inhabiting the body—an extra-organic force within the living creature, and acting by and through it, but numerically distinct from it.

But the view which I venture to put before you as that which is to my judgment a reasonable one, is that of a peculiar form of force which is intra-organic, so that it and the visible living body are one thing, as the impress on stamped wax and the wax itself are one, though we can ideally distinguish, between the two. It is, in fact, a mode of regarding living creatures with, prime reference to their activities rather than to their material composition, and every creature can of course be regarded either statically or dynamically.

It is to regard any given animal or plant, not as a piece of complex matter played upon by physical forces, which are transformed by what they traverse, but rather as a peculiar immanent principle (*) or form of force (whensoever and howsoever arising), which for a time manifests itself by the activities of a certain mass of complex material, with which it is so entirely one that it may be said to constitute and be such animal or plant much rather than the lump of matter which we can see and handle can be said to constitute such animal or plant.

(*) - The word "principle" has been used to denote that activity which, together with material substance, constitutes a living creature, because that word calls up a less sensuous, and therefore less misleading, phantasm than, any other. The term soul, has in modem times come to be associated with the idea of a substance numerically distinct from the living body, and capable of surviving the destruction of the latter. But as structure and function ever vary together (as do the convexities and concavities of a curved line), so **"the principle of individuation" or soul of an animal or plant and its material organisation must necessarily arise**, vary, and be destroyed simultaneously, unless some special character, as in the case of man, may lead us to consider it exceptional in nature. Even in man, however, there seems no adequate reason for believing in the existence of any principle of individuation, save **that which exerts its energy in all his functions**, the humblest as well as the most exalted. **Thus the real essence, the substantial constituent of every living thing is something which escapes our senses, though its existence and nature reveal themselves to the intellect.**

This power or polar force, which is imminent in each, living body, or rather which is that body living, is of course unimaginable by us, since we cannot by imagination transcend experience, and since we have no experience of **this force, save as a body living and acting in definite ways.**

Though no knowledge is possible for us which is not genetically traceable to sensation, yet the ground of all our developed knowledge is not sensational, but intellectual, and its final justification depends, and must depend, not on "Feelings," but on "Thoughts." "Thought", therefore, is our absolute criterion.

It is by self-conscious thought only that we know we have any feelings at all.

Without thought, indeed, we might feel, but we could not know that we felt or know ourselves as feeling. If, then, we have rational grounds for the acceptance of such a purely intellectual conception as that of an immanent principle as the essence of each living creature, the poverty of our powers of imagination should be no bar to its acceptance. We are continually employing terms and conceptions (such, e.g., as “being”, “substance”, “cause”, etc.), which are intelligible to the intellect (since they can be discussed), though they transcend the powers of the imagination to picture. It seems to me that the spirit which would deny such realities is the same spirit which would deny our real knowledge of an external world at all, and represent any material object as “state of consciousness”, and at the very same time represent “a state of consciousness ” as the accompaniment of a peculiar state of a material object - the body. Those who deny that we have a real power of perceiving objects, refute themselves when they speak of “purely physical changes”, or of anything “physical” of which feelings are but the “accompaniment” or “subjects.” For according to them “matter” is but a term for certain “states of consciousness” while they represent each state of consciousness as a function of matter. According to this, let a represent a state of consciousness, and a “physical state.” This mode of representation may be shortly, but not unjustly, described as a process of intellectual “thimble-rigging”, by which the unwary spectator is apt to be cheated out of his most valuable mental possession — his rational certainty. The same spirit asserts that our psychical powers never themselves enter into the circuit of physical causation, and yet few things would seem more certain to a plain man than that (supposing him to have received a message saying his house is on fire), it is his knowledge of what has been communicated which sets him in motion. **To deny this is to deny the evident teaching of our consciousness.** It is, in fact, a mode of regarding living creatures with prime reference to their activities rather than to their material composition, and every creature can of course be regarded either statically or dynamically. **As Each Living Creature Is A Highly Complex Unity; Both a Unity of Body and also a Unity of Force, or a synthesis of activities, it seems to me that we require a distinct kind of physiology to be devoted to the investigation of such syntheses of activities as exist in each kind of living creature.** I mean to say that just as we have a physiology devoted to the several activities of the several organs, which activities are the functions of those organs, so **we need a physiology specially directed to the physiology of the living body considered as one whole, that is, to the power which is the function, so to speak, of that whole, and of which the whole body, in its totality, is the organ. In A Word: We Need A Physiology of the Individual.”** - Prof. George Mivart, FRS, in “Nature”, 21 August 1879.

Consciousness Cannot Be An Agent In The Mechanism

“We observe mental facts of irresistible certainty interpreted by material hypotheses of questionable value; and not only so, but a higher validity is assigned to the material hypotheses than to the mental facts they are invented to explain.

That we are conscious, and that our actions are determined by sensations, emotions, and ideas, are facts which may or may not be explained by reference to material conditions, but which no material explanation can render more certain.

It is also a fact that many actions take place, as we say, unconsciously and involuntarily; and that some take place now consciously, now unconsciously.

These facts also we endeavour to explain: and when **we find that some of the unconscious and involuntary actions Take Place After The Brain Has Been Removed, this is interpreted on the material hypothesis of the brain being the sole seat of sensation and consciousness; and Is Urged In Favour of the hypothesis that Consciousness Cannot Be An Agent In The Mechanism.**

Consciousness as a subjective fact Cannot Be A Material or Objective Fact.” - George Henry Lewes, in “The physical basis of mind”, 1891.

Organic Regulation As The Essence of Life

“We saw that the internal environment is kept constant as the result of a continuous and extraordinarily delicate regulation of the balance between opposing activities. What general conception can we form of this balancing process?

An obvious possible interpretation is that each of the various organs concerned in the balancing process has such a physical and chemical structure that it reacts to a given small deviation in the internal environment so as to prevent further deviation in this direction. As the combined result of the reactions of all the organs the internal environment as a whole remains constant.

It is evident, for instance, that the respiratory centre reacts to very small differences in the hydrogen ion concentration in the blood, in such a way as to prevent larger differences from occurring.

The temperature-regulating centre reacts to small differences in the blood-temperature. The kidneys react in a similar way to very small differences in the concentrations of water, urea, and numerous other inorganic or organic substances.

The organs, such as the liver, or fat-containing tissues, in which material is stored, appear to behave similarly; and we have now every reason to believe that we should find the same regulating activity in every organ or part of the body if our methods of investigation were sufficiently delicate, and we knew the small differences to be detected. In every direction the progress of physiology and pathology is revealing the astounding delicacy and complication of the regulating processes. Up to a certain point we can rest satisfied in the idea that the regulation of the internal medium depends upon the specific structures and corresponding reactions of the organs which bring about the regulation.

But the more we learn about the delicacy and complexity of the regulating processes, the more definitely does a difficulty appear.

It is not for nothing that the body regulates its internal environment so exactly.

The investigations which reveal the exactitude of the regulation reveal equally its fundamental importance to the nutrition and normal working of every part of the body. The organs and tissues which regulate the internal environment are themselves centres of nutritional activity, dependent from moment to moment on their environment.

They are constantly taking up and giving off material of many sorts, and their "structure" is nothing but the appearance taken by this flow of material through them. **The fact has already been referred to that when the supply of Oxygen to the tissues is seriously restricted the result is not merely a slowing down of activity, but actual structural change.**

Similar structural change is known to result from many other slight alterations in the composition of the blood; and so far as the evidence goes, it points to the conclusion that the specific structure of every part of the body depends upon the specific composition of the blood, as well as on the influence of the adjacent tissues or external environment. The regulation by the tissues and organs of the internal environment is thus only their regulation of their own structure and activity. A living organism has, in truth, but little resemblance to an ordinary machine. **We cannot draw any complete line of separation between the regulation of the internal and that of the external environment; for evidently the one is complementary to, and indispensable to, the other.**

Regulation of the external environment is in fact only the outward extension of regulation of the internal environment, and the ultimate dependence on the external environment of the organs which regulate it, is as evident as their more immediate dependence on the internal environment. **Deficiency or Excess: in normal Stimuli, normal Nutrition, normal Temperature, and Respiratory exchange, are as important to the Nervous System as to Other Organs.**

The Environment Determines the Nervous Reactions, and the Nervous Reactions the Environment; but the constancy or regulation which emerges is still unexplained.

The conception of an organism as a mere labile structure which determines, and is at the same time determined by, its environment is unsatisfactory, for the reason that the specific persistence of life is left unaccounted for.

The facts must be examined more closely.

We have seen that it is characteristic of an organism to react towards disturbing influences in such a way as to maintain approximate constancy in its structure, internal environment, and even external environment.

If the disturbance is merely slight, temporary, and of normal occurrence, a simple and normal compensating reaction occurs, and everything seems afterwards to return again to its former state.

But if the disturbance is abnormal, or continued, a significant fact emerges more and more clearly: for new and apparently original compensatory reactions arise, or an ordinary compensatory reaction is greatly strengthened, or supplemented.

The new reaction is accompanied by corresponding structural change." - Dr John Scott Haldane, MD, in "Organism and Environment as Illustrated by the Physiology of Breathing", 1917.

The Guiding Principles

"Guiding Principles are necessary, for medical practice, in the same manner as for life in general. Just as life without guiding principles becomes a vegetative and unimportant existence, so Medical Practice Without A Doctrine Becomes a Blind and Ineffective Craft.

The Principle of the Unity of the Organism

The Organism Is A Whole, and Is The Real Biological Unit.

All Organs, Cells, and Organic Structures; Are Interdependent, and have no real existence save as components of a Corporate Whole.

No Organ, Tissue and Organic Structure Is Independent of the Activity of the Others; But the life of each of these elements is merged into the Life of the Whole. The Unit of Human Life Cannot Be "The Organ, Tissue and Structure": **But the Whole Organism.**

> ***"Ralph Emerson conceived that in some way principles operative in the physical world were correspondentially operative in the mental realm. "Every law in Nature, as gravity, centripetence, repulsion, polarity, undulation, has a counterpart in the intellect." He held that upon this all-resolving Unity: "the emphasis of heaven and earth is laid." "Mind carries the law; history is the slow and atomic unfolding. All things admit of this extended sense, and the universe at last is only symptomatic. Nature is an enormous system, but in mass and in particle curiously available to the humblest need of the little creature that walks on the earth."*** *- in "The Flaming Sword", 6 June 1905.*

The Living Creature Is A Unity: Both Unity of Body And Unity of Force

> ***"As the Living Creature is a Highly Complex Unity, Both a Unity of Body, and also a Unity of Force; a synthesis of activity, we need a physiology specially directed to the physiology of the living body considered as One Whole."*** *- Prof. George Mivart, FRS, in an address to the British Medical Association, 1879.*

J. S. Haldane developed the organismal conception with great accuracy and industry. Influenced by the philosophy of Hegel, he taught that biology must deal with: **The Whole Organisms and not with organs or cells.**

The Biologist Has To Deal With Life, and **He Cannot Understand Life Without the Fundamental Conception that:**

> ***"Each Detail of Organic Structure, Composition and Activity Is A Manifestation or Expression of the Life of the Organism, regarded as a separate and persistent whole."*** *- Dr J. S. Haldane, MD, in "Organism and Environment", 1917.*

The Living Creature As A Whole : A Single Entity

> ***"William Bateson in his Presidential Address to the British "Report of the Proceedings of the British Association for the Advancement of Science", 1914, "Living things are found by a simple experiment to have powers undreamt of, and who knows what may be behind?" Charles Scott Sherrington in "Report of the Proceedings of the British Association for the Advancement of Science", 1922, in his Presidential Address to the same Association in 1922, he maintains that: The Living Creature Is Fundamentally A Unity. "It is as a whole, a single entity, that the animal, or for that matter the plant, has finally and essentially to be envisaged. We cannot really understand its one part without its other. Can we suppose a unified entity which is part mechanism and part not?" While giving no answer to his own question, he says it is one of the privileges of***

> ***the human intellect "to attempt to comprehend, not leaving out of account any of its properties, the how of The Living Creature As A Whole." It appears as though Frederick Soddy in "Science and Life", 1920, is prepared to regard this Unity as the ultimate mystery of life. "For the real part of a man is not his bodily organism, which is continually wasting away and being as continually renewed, nor the physical energy at its command, which is derived entirely from the inanimate world, but is the personality resident in the body and in control of it. There is no other interpretation of the difference between a man alive one moment and dead the next, which, in spite of the great advances in the interpretation of the mechanism of life made by biology, altogether eludes apprehension in terms of the other fundamental conceptions to which our inquiries into ourselves and our environment have led."*** *- in "Contemporary Thought Of Great Britain", 1927.*

The Integration of the Organism, of the Body-Mind

W. E. Ritter, "The Unity of the Organism, or the Organismal Conception of Life", 1919. Works demonstrating even more distinctly the organismal principle are those which discuss the experimental evidence for the Integration of the Organism, of the Body-Mind. Oliver and Schafer, as well as Bayliss and Starling, Show The Role of Chemical Integration Due To The Endocrines. To these conceptions they have given the stamp of scientific accuracy. Gaskell, Langley, and their pupils, in their work on the Vegetative Nervous System, Have Shown Its Integrating Action. Through This System the Organs and Tissues Are Correlated, In Such A Manner that the Body Can Act As A Whole.

Sherrington crowns the Work on Integration by Demonstrating Experimentally that the Apex of the Integrative Scale Is The Cerebral Cortex.

> ***"Many illnesses are a product of our thoughts. Mental Imbalance (ideas, ideals, reasoning); and Emotional Imbalance (negative thoughts, fear, anger) often lead to the root cause of many physical and mental conditions, revealing the connection between mind and body."*** *- Francisco Xavier*

Endocrines in Health and Disease

> ***"There is not the least doubt that the glands producing internal secretions exert an influence upon the exterior of the individual."*** *- Dr Herman E.S. Chayes, DDS, in "Endocrinodontia, or the ductless glands — Their expression in the human mouth", International Journal of Orthodontia, April 1918.*

> ***"For some years it has become increasingly apparent that the control of the body exerted by the endocrines in health and disease is of constant and utmost importance."*** *- in "The Tides of Life: The Endocrine Glands in Bodily Adjustment", The American Journal of the Medical Sciences, September 1933.*

The continuing the Work on Integration, which is recently developed in Sir Humphry Rolleston's Endocrines in Health and Disease and in the clinical research of Sir Walter Langdon-Brown on The Integration of the Endocrine System.

The Endocrine Glandular System

The Glandular System (Endocrine System), or Endocrine Glandular System, this is: All the Glands; is the most complex of all body systems.

> ***"Clairvoyance has been established since 1934, but Telepathy was not isolated experimentally until later in the 1940s. During the early 1950s visitors began coming to the Duke Laboratory in a fairly steady stream, not merely for an hour or a day, but for a month or more. They were mostly persons who had been working on psi (parapsychology) research and had either a collection of results to discuss and analyse, or a programme of thinking or experiment to evaluate. They came from England, Holland, Sweden, South Africa, South America and elsewhere. Parapsychology would, ideally, belong to the Psychology Department; but American psychology is not ready for that. However, parapsychology is getting along well in a few colleges."*** *- Dr J. B. Rhine, in "Bulletin of the Parapsychology Laboratory", Duke University, 1934-1963.*

> *"The ceaseless struggle between the life and death processes of mankind.*
> *In the prevention and curing of disease, in lengthening the life-span.*
> ***Forced to deal with the subtle interplay of 2 entirely different life-threads: the vital energy of the body, which is temporal, and the psychic energy of the personality, which is eternal. The Human Body Is Designed precisely to Join these 2 threads at Conception, and Separate them at Death. The life-thread is focused in the Endocrine Glandular System Which Controls organic growth and structure, regulates body-chemistry and, in the aggregate, operates physiology. The psychic or consciousness thread of personality [the spiritual side of man] is anchored [attached to the Glands, and it controls the physical body by] the Nervous System, the brain and spinal column, the major nerve centres of the body.*** *The 2 life-systems are completely integrated, and both are subject to the stage of evolution. Medical research, although divided into many special fields, is moving so far and so fast that a major break-through, comparable to that*

> *of atomic release, seems to be approaching. Already neurology and endocrinology are beginning to merge with psycho-analysis, psychiatry and psycho-therapy. While they are focused, as yet, on the diseased not on the healthy human organism, they have positive as well as negative implications and potentials." - in "On the Frontiers of the Mind", The Beacon, January 1964.*

The Integration of the Endocrine System

These last works set forth the Integration of the Body As A Whole by a System Composed of the Psycho-Associational Cortex, Vegetative Nervous System, and Endocrines. All of these being Intimately Connected with each other Under the Domination of the Brain. It is a return to the old conceptions of Alkmaion, **the Body-Mind considered as an Equilibrium of Forces Under the Domination of the Brain, as a "monarchy", the very word used for integration 2,500 years ago.**

> ***"I believe, A Connection Between Mind and Body which leaves no ground for the doctrine of psycho-physical parallelism to stand on."*** *- Prof. William E. Ritter, Biologist, in "An Organismal Theory of Consciousness", 1919.*

Production of Endocrine Dysfunction

"Each year brings forth an increasing amount of literature upon the Physiology of the Endocrines in Health and Disease. Attempts to **tie Endocrine Dysfunction with many recognized and some unrecognizable diseases. Each organ of specialized function, each type of tissue and without doubt each cell contributes its share of endocrine secretion which work together for the normal function of a healthy individual. True research is the careful elimination of untruths, and the amalgamation of truths.** Valuable accomplishments are thus made by the concerted efforts of many over a long period of years, yet within a short few years **extracts of the various endocrine glands and portions thereof have, according to literature, wrought miraculous cures upon many diseases and symptoms of disease, from Dysmenorrhea (painful menstrual cramps) to that most dreaded of all diseases, Cancer, whose kaleidoscopic clinical manifestations place it in the category of being a sign and symptom of many body dysfunctions rather than a separate disease.** There will never be a panacea for the control of all abnormal cell growths. Of the endocrine glands the thyroid because of its frequent diseased state and its surgical accessibility has received much attention.

The Toxic Adenoma (a common, non-cancerous [benign] tumour that grows in glandular epithelial tissue, such as the colon, pituitary, or adrenal glands) produces death chiefly by cardiac damage and surgical interference. The cardiac damage is accompanied by a generalized muscle atony, often exophthalmos, increased basal metabolism, emaciation, mental irritability, etc., the pathologic physiology of which has not been satisfactorily worked out.

Within the last few years the benign tumors of the anterior lobe of the pituitary have been extensively investigated, and remarkable palliation and even cures of the associated deformities have been accomplished by divided doses of x-radiation.

While a rapid death from a benign pituitary tumor is rare the deformities produced and in some cases the speeding up the life process places it in the category of having at least a lethal intent. Benign tumors of the parathyroid glands are responsible for a decalcification process which causes certain clinical manifestations such as osteitis fibrosa cystica and the formation of renal calculi.

There are 2 types of parathyroid tumors recognized, the benign hypertrophy of the so-called Wasserhelle cells and the true adenoma. At the present time they probably cannot be differentiated clinically. These tumors should be radiosensitive and since their locations are accessible to radiation there is a definite possibility that certain cases of nephrolithiasis and the associated bone lesions may be markedly benefited by the x-ray. The benign adenoma of the adrenal cortex which causes precocious puberty in children and virilismus in adults deserves the tribute of recognition.

Infection, Toxaemia and Necrosis

Most untreated large tumors will eventually develop areas of malnutrition due to insufficient blood supply. If the inhibition of cellular nourishment is slow, hyalinization will take place, if more rapid necrotic areas appear which act as a culture media for bacteria, Infection, and Toxemia Result.

Large subcutaneous tumors tend to thin the skin by pressure and to cut down the blood supply so that the trauma of the clothes or bed causes an erosion that refuses to heal. In these cases erysipelas frequently is the direct cause of death.

All pedunculated tumors may become twisted on their pedicle resulting in the cutting off of blood supply. Tumors attached to the gut may cause a volvulus.

Death from toxemia in either case may be the end result.” - Dr Charles DeForest Lucas, MD, in “Benign Tumors That Destroy the Patient”, The Southern Surgeon, August 1937.

The Holistic Conception of Disease

According to this principle disease is of the whole organism, of the Whole Body-Mind. It may have local manifestations in cells and organs, but it is never strictly local. Even when local manifestations predominate they do not constitute a local disease but are manifestations of a preceding general disturbance of the Body-Mind. Sir William Gull said in a lecture to students that to give an idea of Bright's disease he should have shown them not the kidneys and heart of the patient in a bottle but the whole patient. **A more precise demonstration of the holistic nature of disease, however, was offered by the first medical biochemists, who showed that before the appearance of a lesion in an organ the whole chemistry of the body underwent change; a modification of metabolism.** The greatest pioneer on this subject was Albert Robin. Even in the early 1970's, in the midst of the intensely localistic conceptions of the Paris school, he demonstrated the existence of chemical modifications in the body, disturbances in the échanges, as he said, prior to and conditioning local lesions. As he was a skilled biochemist, a pupil of Guy Lussac, as well as a clinician, he could pursue technical investigations on that line, and in many diseases succeeded in demonstrating a general metabolic phase. Demonstration of the holistic nature of disease was made on different lines by those who discovered that preceding the local lesion, and even independent of the local lesion, disturbances of the vegetative nervous system exist. Ricker, the anatomopathologist of Marburg, made important research on the subject, which he summarized in his work, Pathologie als Natur-Wissenschaft. Relationspathologie für Pathologen, Physiologen, Mediziner und Biologen. Sir James Mackenzie by his clinical work did much to promote acceptance of the **holistic nature of disease on the same lines of vegetative nervous dysfunction. The Holistic Nature of Disease, Has Been Shown also by the finding of psychical disturbances, disturbances of the psycho-associational cortex, preceding and dominating local organic affections.** To Charcot principally is due the conception of "psychogenesis", of local organic manifestations, a theory developed by Freud, and by many brilliant physicians who have delved into the mental factor in disease.

The Psycho-Neuro-Endocrine Equilibrium

Thus the contemporary conception, which is not pure speculation but has been demonstrated by precise experimental and clinical work, is that preceding all local manifestations there are **disturbances of Psycho-Neuro-Endocrine Equilibrium,**

which ultimately result in modification of the body chemistry, a disturbance of the humours if we wish to preserve the Hippocratic terminology. This could easily be deduced from what we know of biology.

The Psycho-Neuro-Endocrine System

Through the Psycho-Neuro-Endocrine System the organism adapts itself to its environment. Disease is a struggle of adaptation to a changed environment, and thus the first manifestation must be Psycho-Neuro-Endocrine, that is:

General Constitutional, Metabolic, or "Humoral."

The Dynamic Conception of Disease

Disease represents the struggle of the organism against external evils, the attempts at adaptation on the part of the organism to changes in external conditions. By virtue of the inherent characteristics of life the organism tends to remove all factors that threaten life, it tends to cure itself. This conception therefore depends on the general vitalistic principle according to which every living being is animated by a purposive striving to live, to develop and to immortalize itself by procreation, and for the attainment of its ends is "as if" directed by an inner force; the physis of Hippocrates, the Vital Force of the Montpellier physicians, through which it overcomes all obstacles to its development. **Anatomo-clinical workers such as Sir Andrew Corrigan showed the compensatory work of organs to overcome their deficiency.**

Aschoff in a series of brilliant researches showed the purposive nature of inflammation. **Last but not least, the work of Metchnikoff, and other immunologists demonstrated scientifically this "the healing power of nature" (vis medicatrix nature).** In Germany the constitutional etiology of disease was introduced by Beneke, whose first published work on the subject dates from 1878.

Not until 1892 did interest in the constitution revive, with a paper by **Hueppe, a bacteriologist, who showed the inadequacy of bacterial causalism for the understanding of infectious diseases, and insisted on the importance of the soil, of diathesis, as an aetiological factor.**

The principal work on this subject has been contributed by endocrinolegists, predominantly by Pende, who has detached himself from the exclusive morphological view of the Italian school and considers that constitution or biotype means a special **mode of functioning of the Endocrines, and Vegetative Nervous System, The Great Regulators of Constitution.**

Working on parallel lines, I have developed a conception based on the British **work on Integration. Our constitution, our psychophysical make-up, our biotype, is regulated by the integrative system of the body, the Psycho-Neuro-Endocrine System.**

Psychoneurotic Disability

"Psychoneurotic and Psychosomatic illness.

Note on the Term Psychosomatic Illness; The words "psychoneurotic illness" suggest inter alia, the absence of structural change. **Recent researches. however, have shown that emotional reaction may bring about changes not only in function but also in structure** (Dunbar 1935). A more appropriate term for disorders of this nature — whether they are "cases of functional disease or "cases of organic disease "is psychosomatic illness."

This term is cumbrous but useful. It connotes both an aetiology and a mechanism. As regards aetiology, it indicates that the external agents which provoked the reaction of illness were of a special kind, being neither physical nor chemical nor micro-organic, but psychological as, for example, the loss of a beloved object. **As regards mechanism it indicates that the external agent is encountered by the individual, not directly by the outer or inner surfaces of the body, such as the skin or mucous membranes, but indirectly, via the special senses and the integrating mechanism of the diencephalon, autonomic nervous system, and endocrine glands. This triad is sometimes called the psycho-neuro-endocrine system or the "bodily mechanism of emotion."**

By its means psychological factors may affect an individual profoundly, bringing about changes in chemistry, rhythm, secretion, and even structure in One or more parts of the body.

In other words: Bodily Disturbances May Be The Secondaries of Preceding Disturbances in the Integrating Psycho-Neuro-Endocrine System, which in turn was set into a turmoil when the individual encountered events which to him represented deprivation, frustration, upset strain, or difficulty." - Dr James L. Halliday, MD, in "The Rising Incidence of Psychosomatic Illness", The British Medical Journal, 2 July 1938.

A special constitution and thus a special diathesis means a special mode of functioning of endocrines, vegetative nervous system, and psycho-associational cortex, a special modality of **Psycho-Neuro-Endocrine Equilibrium.**

The biological or constitutional principle of treatment consists in treating a diseased individual by helping, sustaining, his constitution to fight the disease.

It consists thus in adopting those therapeutic agents which clinical experience and physiopathology have proved efficacious in strengthening the constitution in its struggle to recover equilibrium. The object, according to this principle, is not the local disease but the constitution, and action is directed towards the regulators of constitution, the **Psycho-Neuro-Endocrine System.**

To cure disease we must therefore mechanically apply stimuli contrary to those that have provoked the disease. **The Psycho-Neuro-Endocrine System; is the system that fights against external morbid elements.**

Thus by reinforcing the psyche by means of psychotherapy we obtain therapeutic results through the mechanism of constitutional treatment.

Psychotherapy is a major biological or constitutional treatment, and its significance has been enhanced by the recent demonstration of the physiological connexion between psycho-associational cortex, vegetative nervous system and endocrines, and thus between the psvcho-associational cortex and all organs and tissues of the body. Dietotherapy, which looms so large in Hippocratic medicine, also has been developed on biological or constitutional lines. The aim of modern dietotherapy is the strengthening of the constitution, and to do this we look at the whole man and not at a diseased organ. In chronic nephritis, for example, until a few years ago the object was to spare the kidney, and thus we reached the method summarized in the saying of a French clinician: “Milk or death”.

> ***“Dietary Hygiene. Milk is the Food and Medicine par excellence for Bright's disease. In short, every effort must be made to make the patient and those around them understand that Milk Is The “sine qua non” of treatment: Without Milk, there is no Salvation, or, as we have sometimes been forced to say, it is Milk or Death. Diet for Hyperchlorhydric Patients: At the height of hyperchlorhydria, that which corresponds to the round ulcer of the stomach, the only applicable diet is the Milk Diet, as Cruveilhier was the first to point out. And the Importance of Milk is such in this disease that it is expressed by this phrase: Milk or Death.”*** *- in “Bulletin Général de Thérapeutique Médicale et Chirurgicale”, 1894.*

[Hypochlorhydria is condition where the stomach does not produce enough hydrochloric acid to maintain a properly acidic environment, leading to issues with food digestion and nutrient absorption. Common symptoms include bloating, gas, indigestion, and sometimes constipation or diarrhoea, which result from bacteria overgrowth and undigested food.]

Nowadays we look on the whole man and endeavour to improve his constitution by giving those elements of nutrition which qualitatively and quantitatively maintain his strength. Disintoxication, and nervous sedation by these means put the patient in better condition to fight his disease and through these general means, as Dr Bernhard Aschner, MD, has shown, many local diseases can be treated. Aschner, has developed this mode of constitutional therapy in a series of publications that have had great success in German-speaking countries. He reintroduced the alterants, laxatives, and nervous sedatives used by our ancestors, chiefly by Paracelsus, and has obtained good results in gynecological affections and in other local diseases. Mohr in his Psychotherapy in Organic Disease, reports that a well-known gynecologist reduced his operations by 50%, since having recourse to psychotherapy. Even this proportion gives promise of further reduction thanks to the introduction of Endocrinotherapy, as the internist endocrinologist Maranon shows in his Gynecologia Endocrina." - Dr A. P. Cawapias, MD, in "Neohippocratism", Proceedings of the Royal Society of Medicine, 1938.

Biophysiological Phenomena

Biophysiological Phenomena are the Physical and Physiological Processes in Biological Systems.

Metabolism

All Biochemical Reactions of processes taking place in the living organisms have 2 Interwoven Aspects:

1. Anabolism: When living organisms synthesise complex organic molecules from simple molecules. It is the constructive phase of metabolism like the formation of proteins from amino acids.

2. Catabolism: It is a process of breaking down complex organic molecules from simple molecules to release energy.

Metabolism takes place in a controlled manner at body temperature.

In this process Enzymes Act as Bio-Catalysts. The energy that releases is stored, and it is further used for growth and development.

The Process of Elimination of Waste Metabolic Products; is called Excretion: Every cell, in our bodies, is impacted by photon of energy, by the subtlest of Bioenergetic Forces; these fundamental, massless elementary particles of light, and all other forms of electromagnetic radiation, serving as the quantum of the electromagnetic field.

The Immune System is a Bioelectric, Biomagnetic, and Biochemical Process

The Immune System acts as a Bioelectric Network where cellular membrane potentials and electric signals regulate immune cell behaviour, such as: macrophage migration, and activation, to fight infections, and aid in tissue regeneration. This Bioelectric Control, often termed the Neuro-Immune Axis, uses voltage-gated channels to communicate, bridging regeneration and pathogen. Changing the natural electrical signaling that exists in cells outside the nervous system; can improve resistance to life-threatening bacterial infections.

Disease

Organic Disease; is the manifestation of Toxaemia in a particular manner in any of the body tissues and body systems. Its cure can be achieved by following a Treatment Protocol in which encompasses both Therapeutics and Diet. Thus allowing for the restoration of normal health, and proper bodily functions.

Healing

Healing; means "to make whole"; is the process of the restoration of health from an unbalanced, or damaged organism. With organic or physical damage suffered by an organism, healing involves the repair of living tissue, organs and the biological system as a whole and resumption of normal functioning. It is the process by which the cells in the body regenerate and repair; to reduce the size of a damaged or necrotic area and replace it with new living tissue, by regeneration in which the necrotic cells are replaced by new cells that form similar tissue as was originally there. All organs will heal.

Electrical Changes in Tissues

"The Electro-Dynamical theory of growth, may alter all our conventional theories about the structure and the Operating Forces of the Human Body, as well as of all other living things both animal and vegetable. The Electrical Forces are predominant in cell-division, and obey well-recognised electrical law.

Films and interfaces within the cell, play their rapid release resistances or attractions to forces separated or immediately coalescing and are gone again. And ever on their surfaces the twin forces of Phosphorus and Oxygen come into fresh play, and energy, sign, and chemical-electrical affinities are determined.

The relations of each cell with its neighbours and with the fluid surrounding it are governed by the same law of equilibrium of the forces regulating that

environment. And the optimum conditions for the cell are determined by these concentrations and that environment. Provision is made within and without each cell for chemical changes made possible only by the action of equilibrated electrical charges determined by solar frequencies controlled by specific light-screens, by the provision of adequate Oxygen supply, Electrically activated by Ultra-Violet, and other chemical rays, and by the fluorescent activities of the individual fluids and cell constituents. We have seen the provision also for electrical capacity, electrical conservation, and electro-motive force, in the universal distribution of phosphatides and inorganic ions, universal, yet specific within each cell. We have seen the same control, by Positive and Negative Ions of Hydrogen and Hydroxyl, of the loose chemical combinations in the synthesis and hydrolysis of cell activity. We have studied the lipoid antitoxin barrier of the cholesterols and estimated the dielectric functions of these and other substances in conserving Electrical Equilibrium alike in cells, and in organs and body as a whole. We have seen that wonderful provision has been made for the generation, storage, control, and Equilibrium of Electromotive Force everywhere and at all times. These Electrochemical reactions we have found to be accelerated at body-temperatures by the presence of Enzymes or catalysts obeying the same law of the equilibrium-constant, whose exact character, whether: Electro-Chemical, Photo-Chemical, or Photo-Electrical merely, is not yet understood. We have realised the interdependence of cell-constitution, Oxygen provision, Light, and Electrical Forces.

And under carefully safeguarded conditions of testing we have satisfied ourselves that in the galvanometric readings of the Electromagnetic field of the body we have a ready means of estimating the physiological and pathological conditions of metabolism which determine health and all departures from health. We have examined the conditions of environment of the body, as of the cell, and we have, alike in plant and animal, watched the effects of: Nutrition, Light, and Oxygen; and we have contrasted the optimum conditions of the creatures of the wild with the unfitness and degeneration resulting from unnatural conditions of living. In our study of disease processes we shall keep this law of equilibrium of cell and body constantly before us, and, striving to understand their many and varied manifestations in the body, see whether we cannot arrive at a wider yet more exact appreciation of the nature, and origin of those conditions which are the stamp of the creature whose personal and relative equilibrium has been interfered with, and which we designate Disease." - Dr A. White Robertson, LRCP, S. Edin., in "Studies in Electro-Pathology", 1918.

Catalysts, Enzymes And Ferments

"We have seen in the study of Photo-Chemical Reactions that the Action of Light is similar to that of a High Temperature. We now have to discuss a **group of inorganic and organic units or systems which present certain points in common with photo-chemical, and electrical laws. The chemical processes which take place in the living organism**, says Bayliss (1915), from whose chapter on "Catalysts and Enzymes" I must quote, are of a kind such as in the laboratory can only be brought about by powerful reagents and high temperatures. Take the hydrolysis of protein to amino-acids. This is effected in the laboratory by boiling concentrated hydrochloric acid, but in the organism it takes place, at an equal rate, at ordinary temperatures, and in a medium which is only just faintly alkaline or neutral. The first discovery was that of Kirchhof (1812), that by the action of dilute sulphuric acid starch could be converted into glucose. In this reaction the acid is itself unchanged and can be recovered at the end of the reaction. Thénard noticed that hydrogen peroxide was decomposed not only by soluble alkalies but also by many various kinds of solid insoluble substances, such as manganese peroxide, silver, platinum, and blood fibrin. These do not themselves take part in the compounds formed, but remain unaltered. A point of significance in view of the mode of action of catalysts is that **they exercise a powerful action even when present in very minute amounts.** The reaction of a catalyst is both hydrolytic and synthetic, and this action is known as reversible reaction, so that synthesis and hydrolysis go on together until a point is reached where the position of equilibrium is reached, when the two reactions are proceeding at an equal rate. This position of equilibrium under a particular kind of catalyst is not affected by the amount of the catalyst present. The time taken to attain equilibrium is shorter with the larger concentration of catalyst. In what are known as heterogeneous systems - and these include the colloidal states - we have to deal with 3 factors: **rate of diffusion, absorption, and chemical reaction proper.** The catalytic action will then, if the other components are in true solution, be determined in time of equilibration by the absorption rate on the superficies of the solid particles of the catalyst. **Enzymes may be shortly defined as the catalysts produced by living organisms** (in yeast). Thus Von Wittich (1872) came to the conclusion that pepsin merely accelerates the action of hydrochloric acid on fibrin. The substance on which the enzyme acts is generally known as the "substrate." **The only really essential property of a catalyst is that it changes the rate of a reaction, including the starting of one which does not appear to proceed of itself, and without entering as a constituent into the final chemical equilibrium.** Enzymes may be specific in that the catalyst appears to act upon a limited number of substrates only; others, again, like emulsin on the β-Glucosides which are almost innumerable in number, show little specificity. They vary also in their sensibility to heat. As a rule they are said to be coagulated or precipitated by heat. In practice this property is frequently useful in deciding the nature of a particular agent. If the action is stopped by moderate heat, say up to that of boiling water, it is almost certainly due to an enzyme or to the action of living protoplasm, using this latter name for the present as a cloak for ignorance. It is found that the solution of an enzyme is found to lose its activity if kept, and that, while the rate of loss varies with the individual enzyme, it is accelerated by rise of temperature. Adsorption by substrate will [Bayliss and Starling, 1903; Vernon, 1904], however, considerably decrease the rate, although not wholly preventing it. Enzymes are injured more or less rapidly by rise of temperature, and the optimum temperature is that at which the acceleration due to rise of temperature is in greatest excess over the simultaneous destruction of the enzyme. **Most enzymes are extraordinarily sensitive to changes of hydrogen ion concentration. This is a common property of the colloidal state and points to the intervention of electrical charge.** In trypsin digestion, which is inactive except in slightly alkaline reaction, the reaction is brought to a stop or much retarded by the concentration of hydrogen ions or the diminution of hydroxyl ions. **This can be restored by the addition of alkali.** Similarly pepsin is inactive in hydroxyl ion concentration. Amylase, on the other hand, requires neutral salts.

Physical Properties of Enzymes

They are all in the colloidal state in solution, and do not diffuse readily.

They are all destroyed by moderate heat. As colloids they have an electrical charge varying with the electrolytes present with them: their activity is retarded or suspended in concentrations of hydrogen or hydroxyl ions inimical to them.

This electrical charge appears to play a part in the mechanism of their action. Many, if not all, are optically active.

Chemical Nature of Enzymes

This is unknown. They are not proteids and, according to Beijerinck, cannot serve as nitrogen food for bacteria or yeast.

> ***"It is probable that, like inorganic catalysts, they are of very varied chemical nature***, *but what this is cannot as yet be stated definitely in respect of any one of them." - Dr William Bayliss, MD, in "Principles of General Physiology", 1915.*

Enzymes act at their Surfaces

Electrolytes behave in this process in the same way as in electrical adsorption, as shown by Bayliss in the case of trypsin (Bayliss, 1911).

If the enzyme and the substrate are both negatively charged a certain obstacle to adsorption exists, since, if it took place, it would increase the Electrical Energy of the surface. If a bivalent ion, say of Calcium, is present, the charge on the surface is reversed and adsorption facilitated. In this way the favourable action of electrolytes in many cases can be explained. Adsorption thus favours acceleration by increasing mass action in unit volume.

There appears to be some evidence that enzymes may make their appearance in response to the presence of an appropriate stimulus or rather substrate.

Thus Duclaux (1899) stated that penicillium glaucum, grown on different media, produced enzymes which hydrolysed these media, enzymes which were absent in other cases.

These appear to be the chief points known, briefly stated, about the nature and origin of enzymes. We are still in the dark as to their elementary nature.

We do not know whether they have a chemical composition or whether they are, as Berzelius said of them in 1887, "a force which differs from those hitherto known.''

They accelerate a chemical change but are not found in the compounds formed, and they are not lost. They act in so minute a quantity that it is impossible to give them a purely chemical significance in the reactions they hasten.

Heat is sufficient to destroy them, and they are known to act on their surfaces, recalling the fact that electrical conductors like copper rods are also charged on their surfaces. They are influenced profoundly by electrical charge and sign, and by the relative concentration of electrolytes in their neighbourhood.

They are reversible in their action, alike synthetic and hydrolytic, as a current along a wire sets up reverse current in a parallel strand. Their action is hastened by diffusion and adsorption (concentration in mass of unit volume) as an electric charge is condensed upon the surface of a condenser plate.

And their colloid "constitution" is of such a complex lipoid-proteidelectrolyte structure as is the structure of all protoplasmic cells. They are optically active, and **they are affected by light and moisture as well as by heat.**

Let us now turn to the cell, its structure, its phases, and its metabolism and activities." - Dr A. White Robertson, LRCP, S. Edin., in "Studies in Electro-Pathology", 1918.

Chapter 1

Emunctology Principles of Treatment

The Usefulness of the Scientific Methods, And Its Well Established Physiological Principles of The Emunctology Treatment. First Cleanse both the Liver and Colon, then Identify and Remove: All Foci of Infection from the individual, applying all that which was Learned in Emunctology School, thus;

1 - The Paramount Importance of the Cleansing of the Liver

The Emunctologist must Cleanse the Liver, this done by Hydropathy packs.

> ***"Hydropathy: The significance of Hydrotherapy for medicine begins with its physiological foundation by Winternitz. The Application and Clinical Use of this Most Powerful of all Physical Healing Factors, now lies before us in Decades of Experience and Research, and demands, with almost elemental force, its integration into Modern Therapy. It was Von Leyden's great achievement for Germany to have granted them full citizenship in science as well, and it is to his initiative that we owe the practical introduction of Hydrotherapy into the field of work and the curriculum of the clinic. Only here can this discipline be precisely tested, guided, and promoted; only from here should it be brought into the circles of practising physicians and become common scientific knowledge. The indispensable prerequisite for this is the establishment of Clinical Hydrotherapy Institutes, the awarding of teaching positions in this field, and its gradual inclusion in examination subjects. The Prussian State has earned the commendable merit of having made pioneering progress in this direction and paving the way with the creation of a Hydrotherapy Institute at the University of Berlin."*** *- Dr Julian Marcuse, MD, in "Zeitschrift für Diätetische und Physikalische Therapie", 1902.*

> ***"Immunity means that: No Abnormal Cell can grow or develop in the body with Normal Metabolism. For that purpose, the degree of restoration of the Liver Plays a Decisive Role."*** *- Dr Max Gerson, MD, in "A Cancer Therapy", 1958.*

> ***Hepatic Circulation: - "The Liver receives a Dual Blood Supply of Oxygenated Blood from the Hepatic Artery, and Deoxygenated Blood from the Portal Vein and Mesenteric Circulation."*** *- in "Clinics in Liver Disease", May 2019.*

Concerning The Reflex Disorders Types of Organic Affections Upon The Nervous System

> *“The reason is that in spite of the **differences between them Hysterical Manifestations and Reflex Disorders produce identical sequelae, have points of contact, have been and still are frequently confused and are often associated, with the result that a profound knowledge of the one is necessary in order to understand the other. In this respect one may compare Reflex Disorders with Organic Affections of the Nervous System**, which were very often confounded with hysteria in the days when the objective signs, now well recognised, were not at our disposal.” - in “Hysteria or Pithiatism, and Reflex Nervous Disorders in the Neurology of War”, 1918.*

Concerning Hygiene As A Therapeutic Agent In The Treatment of Disease

“I wish to restrict myself to what might be designated as Therapeutic Hygiene; or Hygiene as a Therapeutic Agent in the Treatment of Disease. I wish to emphasise the Essentials of Hygienic Treatment, in as far as they concern the physician in clinical work. In the Treatment of Chronic Diseases the tide is turned in the patient's favour, By the Correction (of the Violation) of some Hygienic Principle. Many patients go from one physician to another, without receiving any benefit, until some simple phase of his case is discovered, that clears up the situation. It is notoriously a fact that the elementary truths of medical science, the simplest laws of health, are not infrequently disregarded by the physician who takes too much for granted in investigating his patient's case. 5 Clinicians in succession examined and treated a case of Epilepsy (woman). The patient became worse until an old practical country doctor took hold of the case, Stopped All Medication, made the patient Discard her High-Heeled Shoes, and thus cured her. Her Epilepsy was a Reflex Neurosis. The simple fundamental laws of health which culminate in the Hygienic Importance of: Open Air, Sun Light, Exercise in the Open, Proper Food, Cleanliness (personal hygiene), and Excretion (specially having daily bowel movement), have lost none of their importance. They have become more significant and necessary because the tendency of modern man is to deviate from the normal standard. The advice given to “get out more and take more exercise”, should be formulated by a deeply rooted and conscious appreciation of Air, Light, Exercise, Proper Food, Cleanliness, Excretion, as Therapeutic Agents of fixed value in a given case.” - Dr Otto Juettner, MD, in “Modern Physio-Therapy”, 1913.

The Pathology of Reflex Disorders And Its Treatment

"Therein lies the Pathology of the so-called Reflex Disorders.

The transmission of impulses of this kind follows the direction of least resistance. Why a certain path offers less resistance than any other and why, therefore, manifestations of a certain kind follow, is not easy to determine.

Therein lies the difficulty of accounting for these Reflex Disorders.

There is no doubt, however, that undue irritability of a nerve-fiber indicates a loss of resisting power or tone, and Is also an Evidence of Increase, Decrease or Perversion of Nutrition. Both Functional and Reflex Disorders, Are Only Secondarily Connected with the Activity of the Nerve-Mechanism. Primarily they must be Aberrations of Nerve-Nutrition; for reasons cited above. It is clear, therefore, that the study of Nutrition, and therefore, of the Blood, Is of Paramount Clinical Importance. The physician should remember at all times that the: Blood Is The Medium of Metabolism. It is the Carrier of Food, of Fuel, of Heat and of Waste according to certain Physiological Laws. It receives food through the lungs and through the stomach. It assumes different forms of consistency, composition and character in keeping with the activity of the different organs. It carries the food elements to the lungs and exposes them to oxidation. It deposits waste in the organs of excretion. Thus, we see that the Blood is the Factor upon which Metabolism hinges. If metabolism in any of its phases, or in any part of the body is disturbed, the blood is concerned primarily. Secretions may fail in their natural function and undergo chemical changes. Excretions and Combustion Products, May Be Retained, and again enter the circulation. All these substances are foreign to the physiological purposes of metabolism, and, therefore, are to all intents and purposes Poisons. Their presence in the body is equivalent to an Ischemia (inadequate blood supply to an organ or part of the body), and may give rise to an endless and numberless variety of symptoms of Poisoning Through Malnutrition (perverted nutrition) of the organism, wholly or in part.

This is what is meant by Auto-Intoxication, The Most Powerful, the most variable and the most neglected Etiological Factor in the Production of Disease and its Symptoms. It is the pathology of most so-called Functional and Reflex Disorders. It is the One Factor Which Explains the Clinical Features of Many Chronic Diseases. In Skin-Diseases, Auto-Intoxication of some sort or other; Is The Dominating Etiological Factor. Toxic Conditions of the Skin-Nerves; May Cause changes in the trophic condition of the skin.

The Disease may be Coincident with an intense Eliminative Effort made by the Skin. In all non-parasitic skin-diseases, The Condition of the Skin Is Secondary To The Toxic State which prevails within the system, and Finds its Outward Expression in the Cuticle. These Changes Are Secondary To The Actual Causative Factor, which precedes the disease of the skin: A Disturbance of local or general Metabolism. This explains the futility of local treatment in these cases, and liability to recurrence. In view of all these facts, we are prepared to understand the philosophy of the Hippocratic dictum; concerning the 4 Emunctories. The Prophylaxis of Disease Lies Largely In Physiological Excretion. The Cure of Disease (especially Chronic Disease); Depends on Our Relative Ability To Promote, Control, and Regulate Excretion. This is what gives Hydropathy, and Thermotherapy their Commanding Place in Clinical Medicine.

In All Chronic Diseases Auto-Intoxication is the One Factor, that Must Be Reckoned with, and Must Be Conquered.

With These Facts In Mind, We Are Able To Understand the Nature of Rheumatism, the Symptomatology of Many Diseases, and, above all, we are prepared to attempt the Treatment of Diseases of the Nervous System, that are so universally misinterpreted and unsuccessfully handled.

We are ready to admit that Functional and Reflex Disorders, have no pathological significance because: They Are invariably Secondary To, and Symptomatic of Some Underlying Disorder of Nutrition.

General and local Elimination, Is The Keynote of Treatment In All Functional Disorders. Irrigation of the Colon Is Indispensable.

In Most Persons the Colon Is a Stagnant Sewer, Full of Filth and Infection.

Metschnikoff believes that man, would live to an average age of 150 to 200 years, if it were not for the fact that he carries the germs of decay, and death, constantly in his Large Intestines. The Importance of Colon-Irrigation can not be overrated in cases of Functional Disorders, due to ill-defined causes.” - Dr Otto Juettner, MD, in “Modern Physio-Therapy”, 1913.

> ***“Our studies in Osteopathic Pathology, and Osteopathic Physiology; have led to certain conclusions which are of interest. First, that:***
>
> ***Osteopathic Lesions May Be Causative of Pathologic Change in Organs Distant from the Lesion; that this pathologic state may be causative of physiologic perversion, and that this in turn may have a far reaching effect.***
>
> ***Let us consider, for example, a lower thoracic lesion causing pathologic change in the kidney, causing a toxic state of the blood; causing optic and auditory nerve degeneration.”*** *- in “Journal of the American Osteopathic Association”, June, 1917.*

2 - The Paramount Importance of the Cleansing of the Colon

The Emunctologist must Clean the Colon, this done by Hydropathy Colon Irrigation. The Cleansing of the Body is Fundamental. For through the Colon many re-infections take place by overtaxing the system with drosses from fermentation.

THERE IS NO POINT ON TREATMENTS IF THE BODY SYSTEM IS IN A STATE OF TOXAEMIA, under the burden of Auto-Intoxication.

For, what point is there to give any treatment; if the White Blood Cells (the main defence mechanism of the body), are being destroyed by the very same Toxaemia. Also, what point is there on feeding the individual, if the state of Auto-Intoxication is present, and thus it is an impediment for the body to fully be able to absorb the very much needed nutrients, minerals and vitamins, provided by the food administered. For in such cases of individuals in a state of Emergency from Ill Health, the food given should be the Milk Diet first, followed by the Fruit Diet.

> ***"The First Component is the Detoxication of the Whole Body.***
> ***Which has to be carried out until all the Tumours are absorbed, and the essential organs of the body, are so far restored that they can take over this important "cleaning function" by themselves."***
> ***The Entire Intestinal Tract has to be Restored Simultaneously; with the restoration of the Intestinal Tract, the most important Secretory Functions will be repaired, as well as its Circulation and Motility Regulated by the Visceral Nervous System.***
> ***The deficiencies cannot be restored as long as the essential organs are poisoned."*** - *Dr Max Gerson, MD, in "A Cancer Therapy", 1958.*
>
> ***"Disease Can Only Be Cured By And Through the Blood, and its circulation in the living parts of the body. Any means that Improves: The Quality, The Quantity, and The Movement of the Blood, will assist in Eliminating Disease."*** - *Dr Charles Sanford Porter, MD, in "**Milk Diet as a Remedy for Chronic Disease**", 1923.*
>
> *Please see Chapter 13; Concerning:* ***The State of the Blood as a Major Factor in Disease.***

Natural Immunity to Disease is Primarily Due to the Presence of Chemical Substances Which Interfere with the Normal Oxidation Processes of the Cells

"Particular reference to the necessity of treating the patient As A Whole, and not as a mere assortment of unrelated parts; consequently, of regarding local symptoms as an indication on the part of Nature of her efforts to readjust a general disturbance of the body's functions.

Dr Mazel showed how this rational approach to disease treatment was shared by wise physicians of the past as well as by modern. Passing reference was also made to the illuminating theories of Dr William F. Koch, which, based upon the pure chemistry of the body, and borne out by clinical experience, showed that lack of **"Natural Immunity" to disease is primarily due to the presence of chemical substances of certain molecular structure which interfere with the normal oxidation processes of the cells and thus stimulate disordered growth or function of the organs concerned. Health was to be regained only by restoring the normal physiological oxidation mechanism of all the cells of the body; not by attacking or suppressing some local symptoms by which the disordered metabolism had made itself manifest. True Medicine, as the lecturer put it, was thus seen to deal with Life, the power behind the living body.**

As instances of the prevalent forms of repressive treatments Dr Mazel dealt first with the practice of heavy drug dosage, notably in cases of infectious fevers, and of skin disease; secondly, with surgery which skilfully removes offending organs that are the danger signals by which the body expresses its need of help, while often leaving the Underlying Toxic Condition Entirely Untouched. The tonsil, the appendix and the colon gave scope for the illustration of her argument.

Dr Maze discussed in a startling manner some of **the pernicious hygienic habits which are customarily imposed upon children, including over-clothing, sitting still in a chair, wrongly directed exercise, eating or drinking when not hungry or thirsty and too rapidly, Faulty Bowel Activity, and so on.**

Childish Ailments, were to be fought, not when the child is already ill, but in the antenatal period, or even before conception; by: Laying The Foundation of that Natural Immunity which will eventually become the heritage of those who follow the Natural Way of Living." - Dr Dorothy Mazel, M.R.c.S., in "Children and Repressive Treatments", Progress To-day — The Humanitarian and Anti-Vivisection Review, The Health Education and Research Council, April-June, 1937.

Biologic Immunity

"The Only Adequate and Effective Prophylaxis (treatment or action to prevent disease), lay in Biologic Immunity, through Blood Resistance, and opsonic stimulation. This side we ought to have considered, yet not have left the other side unconsidered. As a matter of fact, the intervention of the bacteriological factor did not alter the validity of the vasomotor factor; for the role of the vasomotor mechanism in the production of the cold was an established, clinical fact; and, I repeat once again, bacteriology cannot and does not alter clinical facts. By all means let us replace the word "'cold,"' and the morbid entity which it used to convey, by the word "infection," with all that the latter term implies.

By all means let us recognize and avail ourselves of the other side which bacteriology has opened up to us. But, cold or infection or whatever it be, we cannot, and we should not, get away from the clinical fact, established by years of occurrence and observation, that exposure to vasomotor disturbances does precipitate the disease. Dr John C. Rommel, in a communication to The Medical World, calls us back in timely fashion to this sensible viewpoint, and makes a strong plea for a more systematic play-up of the vasomotor element in the prophylaxis of colds. Nor does he stop at merely calling attention to the subject, but, like a good constructive critic, he propounds a practical method of applying the principle for which he contends. He urges a rational and systematic practice of "hardening" the skins of those persons who exhibit a special susceptibility to changes of temperature by means of treatment with cold water, cold air, and the wearing of lighter clothing, particularly the discarding of woolen underwear which, as he points out, irritates the skin and keeps it in a continued state of relaxation." - in "Prophylaxis of Colds", The American Journal of Clinical Medicine, January 1915.

A Healthy State of the Blood Provides Natural Immunity to Infection

"It was soon found that Bacteria Eliminated Toxins, and that Blood Possessed Protecting Properties Which Varied at Different Times. Virchow noticed the Ameboid Movements of Leucocytes, and Their Ability to Take Up Inert Particles. Mettschnikoff, in 1887, evolved the phogocytic idea, that leucocytes by chemotoxis were drawn to an infected site and took up the invading micro-organisms. Buchner, in 1888, showed that blood serum contained bacteriocidal properties and called the agents within the blood bacterio-lysins.

Vaughan in 1891, concluded that Immunity Depended on the Existence of Certain Proteid Substances in Blood Serum. These proteids have been called by different observers germicidal globulins, neucleins, defensive proteids and alexins. These Antibodies are supposed to be proteid substances, and Destroy or Neutralize Bacteria and Their Toxins. Depending on their actions the various antibodies are designated anti-toxins, lysins, precipitans, cytolysins and agglutinins. The side chain theory of Erlilich in 1897 was given as an explanation of the action of antibodies.

This theory was founded on the physiology of cell nutrition and is that each body cell has a peculiar affinity for its individual nutrient molecule, by means of imaginary appendages named receptors, which combine only with molecules possessing like appendages termed haptophores.

Now certain toxins may happen to possess like haptophores, as for instance, the tetanus toxins' affinity for brain cells.

When this latter combination takes place, the cell may die either from starvation, because the nutrient molecule is excluded or from toxin poisoning. When the toxins lack these haptophore appendages, this combination does not take place and we have a state of "Natural Immunity."

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When the toxins lack these haptophore appendages, this combination does not take place and we have a state of "Natural Immunity."

If, however, the cell survives, it may be stimulated by the toxic irritation, to develop new receptor appendages, which combine with and neutralize more toxin haptophores, and we have "Acquired Immunity."

If this receptor formation becomes excessive, they may become detached from the cell and circulate in the blood stream ready to combine with the proper toxins. These free receptors are supposed to be the antibodies.

In 1895 Denys found that the blood serum contained an antibody which acted on bacteria and rendered them more susceptable to phagocytic action.

In 1902 Leischman began estimating phagocytic power by mixing equal parts

of blood and a watery emulsion of bacteria, incubating and counting the average number of organisms per leucocyte in a stained slide of this mixture.

In 1903 Wright and Douglas noticed that when a patient was inoculated with a small dose of a sterilized emulsion of bacteria this phagocytic power was increased. They named the antibodies responsible for this action opsonins and devised a method, which is a modification of Leischman's, to estimate the opsonic power or index. It is essential that the vaccines be made direct from the patients infection.

In conclusion, the writer would urge that where double infections exist they be treated simultaneously, since healing is not so apt to take place so long as either infection persists." - Dr B. W. Rhamy, MD, in "Opsonic Technique", Fort Wayne Medical Journal-Magazine, 1907.

The Cause and Cure of Cancer: Allergy and Infection

"The Oxidation Mechanism supplies the energy for all vital processes, and for every cell function, for cell growth, repair, and for the phenomena of immunity.

This same Oxidation Mechanism burns up the Poisons that interfere with cell function and growth, and thus it overcomes disease.

Indeed, The efficient activity of the catalysts of oxidation determines the state of health and immunity, and therefore their supply must be maintained and protected. Since Diseases often Obtain Entrance to the general economy through the Intestine, it is important to protect the catalase and peroxidase of the Intestinal Mucosa from destruction. Sulfides, certain amines, amides, and oximes that might be produced in the colon through bacterial activity in conjunction with faulty diet, and constipation are able to destroy these catalysts.

The various metals that inactivate these oxidation catalysts, as aluminium and bismuth are known to do, should also be avoided. Thus by guarding the main portals, great advantage can be gained in health maintenance.

So rapidly is confirmatory data being accumulated in our present day, that one may now discuss fully the chemical natures of allergy, immunity, and of the oxidation mechanism as we employ them to remove the basis of disease.

Only a Crippled Oxidation Mechanism is required to permit the entrance, development, and activity of the poisons at the bottom of allergy; and this suppression of oxidation can come about.

But the common catalase destroyers like aluminium, bismuth, hydrogen

sulphide, tannin, toxic amides, and other nitrogenous materials originating in a putrid Colon, and in Focal Infections, and also the exhaustion of catalase by fatigue and exposure play their part here just as they do in the preparation of the patient for such acute infections as Pneumonia, and Infantile Paralysis.

In all of the Allergies, including Cancer, the toxic agent is a product of comparatively anaerobic activity, be it produced in a plant, a germ, a spirochete, or from some metabolite in the body. The Toxic Activity may be multiple, and persist for years producing various allergic symptoms and tissue changes before an appropriate molecule has absorbed deeply enough into so primitive a structure as the reproductive mechanism to facilitate its acceptor behaviour.

Thus we often see years of: Allergic Headaches, Neuritis, Gastric Ulcer, Psoriasis, Arthritis, and the like, before a cancer growth comes (Koch, "Cancer And Its Allied Diseases", p.52, 1929).

Strangely enough, when the growth gets well under way the pregrowth symptoms are lessened in intensity or may disappear altogether, and the growth evidently serves as a detoxicating mechanism so far as these symptoms are concerned. But it, of course, produces other poisons incidental to its lost oxidation capacity, because it permits support to so many toxic organisms.

This protective function is secondary to the allergic cell divisions for with increase in the amount of colloidal cell substance; adsorption capacity is increased favouring detoxification of the rest of the body.

This factor is also facilitated by the deficiency in divalent cations and a lipoid in water phase of the cancer cell contents, whereby materials gain more ready entrance to the cancer cell than to normal cells.

What the cancer cell attempts in part, therefore, is to protect the body, and come back to normal by diluting its contained toxins through multiplication.

Malignancy is profoundly cyclic in its expressions: Psoriasis, Epilepsy, Insanity, and Asthma, are among the other allergies that share this quality most noticeably. I have seen severe cases recover without showing reaction, until after the recovery from the malignancy was fully established and then take place at the 72 week. Sometimes a recovery process will go on slowly for 4 years before it is completed (Koch, "Cancer And Its Allied Diseases", p.151, 1929).

The reaction fevers are to be attributed to the oxidation of materials absorbed from the growth as it undergoes digestion. But it is also to be attributed to the burning of accumulated polymerized fat and sugar products and other bodies that should have been burned up were the oxidation mechanism sufficient and unencumbered.

During the recovery the destroyed tissues are replaced with normal tissue

elements, and not with scar tissue, because there is no infection present to call for a scar tissue capsule, and in other parts of the body where scars had been present for many years following infection, such scars are absorbed and the deformity corrected in a major way. It makes no difference whether the destroyed part is a bone, the recto-vaginal wall, the uterus, the breast, the larynx, or the tongue, and even perhaps the retina and brain. We have seen them all undergo full repair to normal structure where visible, and with return of normal function.

Treatment Protocol

The diet should be selected to give adequate nutrition in dynamic factors but to avoid tannin, the terpenes of fruit skins and the acids that rob the colloids of their cations. These acids are mainly tartaric and oxalic. Animal proteins should be Avoided, because they supply the bacteria of the colon with nitrogenous material from which to make toxic amines, amides that inactivate or destroy the catalase and peroxidase of the tissues. Vegetables, Fruits and Whole Grain Cereals un-parboiled cereals (not processed, such as corn or oat flakes, not paraboiled) serve excellently (Citrus Fruits not to be given, nor taken on the same day as whole grain cereals). Narcotics and Anesthetics (any drug) of all kinds should be Avoided, for they injure the dispersion of the colloids and interfere with action of the co-enzyme hydrogen acceptor systems of oxidation. Aluminium utensils are prohibited.

Colon Lavage should be sufficient to make up for any elimination defects.

Milk of Magnesia can be used when required for catharsis.

The injection of the catalysts should be made intramuscularly after a few days of Colon Lavage, and liquid diet of apple juices (not green apples, and no seeds, but with the peel), and the raw or cooked vegetable juices (preferably purple carrots), only after which the solid diet is resumed.

The injection may be repeated twice at 14 intervals; of if a reaction or improvement is observed after the first or second injection the other may be omitted.

Conclusion

It should appear from what has been said; that in the development of a great variety of diseased states the Primary Causation Factor Is a Reduced Oxidation Catalysis.

Therefore; The Measure that Corrects This Defect Removes the Basis for Secondary Factors of Causation, and Must Play the Fundamental Role in the Recovery From All Diseases, be they: Infections, Allergies, or Metabolic Disturbances. Indeed, there is but One Essential Pathology, no matter what clinical picture the secondary causes are able to produce, and thus the complete correction of each of them depends upon the same activity, the Restoration of an Efficient, and Sufficient Oxidation Catalysis.

This is possible only by the action of a catalyst, that is more labile, and more energetic than any of the disease-causing toxins, hormones, vitamins, or other physiological catalysts." - Dr Wm. Frederick Koch, MD, in "Pathogenesis and immunity as conveyed by ethylene and carbonyl groups in the cause and cure of cancer, allergy and infection", Byron Sanitarium, London, Ontario, Canada, 18 August 1935; Hartford Connecticut Hospital, 1 December 1935; Hahnneman Hospital, Liverpool, England, 23 February 1937, American College of Proctology, in convention, Chicago, USA, 21 September 1937, published 1938.

Cancer of the Rectum

"The Rectum is lined with a thick and vascular mucosa Reticular tissue, is especially rich in lymphoid cells in many locations in the body. This tissue may occur isolated, or in small bundles. Connective tissue cells are found usually in the stomata or interspaces. There are 2 lymphatic systems of the rectum; the muscular and those of the mucosa. Those of the mucosa are of 2 types, one extending to the lower ends of the columns of Morgagni, the other above that level. The depressions between the columns are poor in lymph channels.

Another and outstanding preparation, that has come to the attention of the profession, with numerous reports from many physicians, in the successful cure of Cancers, is the Glycolyde or synthetic serum of Dr Wm. F. Koch.

The first case I treated with the "Koch Serum" has now arrived at the 3rd year since his first dose. He has had 3 doses at intervals of several months.

This was an annular obstructed rectum of the carcinoma type. The annular obstruction has been absorbed. There was a great deal of bowel distress, and that has not made much disturbance for some time. There are now only some small nodes, soft, and undergoing resolution. There was a great deal of tormina, dragging down feeling in the sacrum and frequent small passage of fluid-like stools, irritating in character. That has been brought under control. Now he has a fine appetite and gets around as usual, though not entirely free of all signs, but on the upgrade.

This case I had with me in Chicago at the Convention Clinic, and he was examined by several doctors present. With all of them I make it a rule to use a solution of Hydrochloric Acid with Essence of Pepsin, or Elixir of Lactopeptine. It makes a nice red mixture which is given in teaspoonful doses after each meal in half glass of water. One thing I have noticed, and it has also been reported by many others, is the relief from pain, tension and a recession of the cancer growth. In late cases with much pain, opiates may be used to effect, and Opium suppositories are also of much benefit for local use in the rectum.

The Bowel Washings; as advised by Dr Koch, Are Very Useful in reducing toxins, and their absorption, and also reduces flatus, the lessening of bacterial activity, and a colitis so peculiar to cancer. I believe that the great work of the Hendry-Connell Foundation, and of Dr Koch is in the right direction of an ultimate and final solution, of the real causes and cure of cancer. All reports seem to be that there is an increase of cancer cases and deaths therefrom, despite all orthodox efforts. It is well to explore new paths of thought and work.

Orthodoxy has not solved the problem." - Dr G. F. Messer, MD, in "Cancer of the Rectum", Journal of The National Proctologic Association, May 1941.

The Importance & Therapeutic Value of Colon Irrigation

"Large Numbers of Individuals Remain in Disturbed Mental and Physical Health; solely because of a failure to recognise the Colonic Tract As A Focus of Infection. Many eminent authorities agree, that the presence, and Absorption of Colonic Bacteria and Toxins Are Responsible for the Majority of Human Ailments. No other part of our body that brings about more deleterious effects upon our system than the Colon; and equally probable that no other port of our system has been so Uniformly Neglected. Large Proportion of these individuals Drift Into A State of more or less Complete Invalidism. Systemic Toxemia, from Intestinal Auto-Intoxication (Absorption of Poisons from the Bowel), and the resultant lowered resistance, has been proved responsible for many Focal Infections, and Disturbances of Metabolism. Efforts to treat this Endocrine Unbalance, are usually futile, Unless the Conditions That Deplete the Endocrine Glands are Removed. Mouth, Teeth, Sinuses, and Tonsils, may all be factors, but the basic cause in 80% of the cases will be found in the Large Bowel (The Colon). Later, as Toxemia increases and resistance is lowered, focal infections will flare up in the nose, throat, and elsewhere. So malfunction is frequently primary, and disease is secondary, and therefore Many Diseases Can Be Eliminated by the Restoration of Normal Functioning. We should assist our

patients to Pay More Attention to those Habits Concerning the Hygiene of their Gastro-Intestinal Canal, as the Continuous Absorption of Toxins from the Bowel, Saturates the System With Poisons. These Poisons which wreak their Damage on Every Organ, and Tissue of the body, reach even the Endocrine Glands, and cause serious disturbances. Many pages might be written of the causes, and the various existing conditions that lead to Faulty, Irregular, and Insufficient Elimination of Waste Material from the Intestinal Canal.

A few of these causes may be here mentioned:

1. Atomic conditions of the intestinal and abdominal musculature with associated ptosis;
2. Infections of the intestinal wall with associated spastic conditions;
3. Mechanical interferences with fecal expulsion, acute and chronic affections of liver, stomach, and intestines;
4. Errors in diet;
5. Diseases of the secretory organs,
6. Various diseases of the spinal cord.

One may have one, or more bowel movements a day, and still have Stasis in certain parts, or all parts of the large bowel; so regular bowel movements daily, do not rule out Intestinal Toxemia.

When the contents of the large bowel are unduly delayed in their passage to the anus, and remain long retained in the bowel, chemical changes take place in the feces, and many of the waste products are split up into Poisonous Substances or Toxins.

The Symptoms of a General Toxemia may be classified as follows:

1. Those referable to the Nervous System.
2. These patients have an Apathetic, careworn expression; they are cranky, crabid, and cynical; they are easily worried, and molehills of trouble seem like mountains.
3. Uncontrollable Crying spells arise without apparent reason.
4. Vasomotor Paresis; is evidenced by the Red Line that Appears upon the Skin after Scratching.
5. Cold hands and feet, some complain bitterly of the cold.

Other Symptoms are:

1. **Dizziness.**
2. **Insomnia.**
3. **Headaches.**
4. **Mental hebetude.**
5. **Fainting, or all gone sensations.**
6. **Neurasthenia.**
7. **Psychosthenia.**

And mental symptoms that may border on those of insanity:

1. **Neuritis.**
2. **Neuralgia.**
3. **Migraine.**
4. **Irritability.**
5. **Excessive mobility of temperament.**
6. **Depressed one day, buoyant and high spirited the next.**
7. **Over-kind, then brutal, and impossible to live with.**

Frequently Mental and Nervous Symptoms, had been the only complaint, no symptoms referable to the Intestinal Tract had ever been manifested.

Symptoms referable to Abdomen are:

1. **Sense of distension,**
2. **Usually epigastric,**
3. **And immediately after eating irregular attacks of nausea with or without vomiting,**
4. **Gaseous eructations,**
5. **So-called "bilious spells",**
6. **Dragging sensation with pain in back or loins,**
7. **Loss of appetite.**
8. **Dyspepsia.**
9. **Vague abdominal discomfort,**
10. **Bowels may move daily but inefficient;**
11. **Marked constipation and occasional diarrhoea; Constipation is the rule (but not always so).**

Then, too, there are the symptoms of:

1. Gastric and Duodenal Ulcers.
2. Enteritis.
3. Colitis.
4. Appendicitis.

Symptoms referable to the Circulation are:

1. Palpitation, a rapid overactive heart or a slow, weak muscled heart.
2. Cardiac irregularity from vagal irritation.
3. Missed beats.
4. Praecordial Anxiety.
5. High blood pressure usually (but may have a subnormal).
6. Secondary Anemia.
7. Shortness of breath.
8. Easily exhausted.
9. Vertigo.
10. Cerebral Anemia.
11. Sensation of Faintness.
12. Splanchnic Congestion.
13. Myocarditis.
14. Endocarditis.

Symptoms referable to the Muscles, and the joints are:
1. Painful and stiff muscles and joints, so-called Rheumatism and Arthritis.

The Skin symptoms are:

1. Urticaria.
2. Acne.
3. Boils.
4. Carbuncles.
5. Falling hair.
6. Baldness.
7. Herpes.
8. Pruritis.
9. Dermatitis.

The Eye symptoms are:

1. Painful Eyeballs.
2. Disturbances of Vision.
3. Sense of Distention.
4. Cataracts (toxic deposits in the lens).

The Genito-Urinary symptoms are:

1. Nephritis.
2. Pyelitis.
3. Cystitis.

The catalogue of conditions arising from absorptions from the Large Intestine is so long, that to name them would sound like over enthusiasm, if they were not vouched for by our greatest medical, and surgical men of today.

Sir Arbuthnot Lane, after listing, and discussing innumerable diseases, asserted that:

> ***"None of these conditions can arise, except in the presence of Intestinal Intoxication."*** *-*
> *Sir Arbuthnot Lane, Surgeon*

In High Blood Pressure - First we have a chronic intoxication, the endocrine glands become depleted, the detoxicating organs become inefficient, and we have a Chronic Intoxication, plus a Deficient Catabolism of the waste products of the body. These factors are the underlying causes of high blood pressure in the greatest percentage of cases.

Intestinal toxins act through irritation to the intima of the arterioles and the Vasometer Center, and produce toxic angio-spasm. The circulation of the toxins in the blood bring about an exaggerated vaso-constrictor irritability. This irritation plus the pulse violence eventually rob the arterial coats of their elasticity, and bring about other changes in the capillary walls.

These pathological changes interfere with the exchange between the blood and the tissue cells. Our body tissues are normally slightly alkaline.

When this degree of alkalinity is lessened illness results and dangerous conditions arise long before the neutral point is reached. Death occurs if it goes beyond the neutral point, even to the slightest degree.

The most common Symptoms of Acidosis are:

1. Headache.
2. Nausea or vomiting.
3. Lassitude.
4. Loss of Appetite.
5. Irritability.
6. Weakness.
7. Easily exhausted.
8. Muscular aches and pains.
9. Sour stomach.
10. Acid urine.
11. Mouth ulcers, and Ulcers of the Stomach.

Later Symptoms of Blood Vessel Changes, as:

1. High blood pressure.
2. Kidney.
3. Heart disease.

The most common cause of Acidosis can be found primarily in the Intestinal Tract where there is an excess production of acids that are the end products of protein putrefaction, carbohydrate fermentation, and food intoxications.

The co-existant Auto-Intoxication Depletes the Endocrines, and we have in addition to those Acids Formed in the Colon, an excess amount of acids, which are developed as the End Products of Disturbed Metabolism.

A condition results wherein there is not only an over-production of acids, but also a retarded elimination of them.

Diet Is Another Factor to Consider: for if there is an excess amount of acid ash foods partaken, and if they are improperly eliminated by the kidneys, there will gradually develop a greater degree of systematic acidity with a lessening of the alkalinity of the body. These cases either eat too much acid, or not enough alkaline ash foods to maintain a normal acid-base equilibrium.

The majority of acidosis cases can be prevented.

If already present, the patient can be Quickly Relieved by Colonic Flushing's which remove toxic wastes, and putrefactive organisms.

In addition to the Colonic Flushing's, prescribe sparingly of the acid ash foods, and these foods should be well balanced by alkaline ash foods.

The circulating Intestinal Toxins in the Blood, Act Upon the Bronchial Sensory end Organs of the Vagus.

These cause afferent impulses to be transmitted to the vagal center. Normally they would cause periodic contractions of the bronchi, but being hypersensitive the center projects violent stimuli to the bronchial muscles and mucosa, which causes broncho stenosis, which in turn causes the Asthma. The bronchial stenosis is due principally to the contraction of the bronchial muscles and congestive swelling of the bronchial mucous membrane. Bronchial Asthma is usually considered a Reflex Neurosis, and is due primarily to oversensitiveness, and irritability of the vagal center. It is most Commonly Brought About By the Absorption, and Circulation of the Intestinal Toxins.

Calcium Deficiency Causes Over-Excitement of the Nervous System.

The Calcium content of the blood is determined, and is kept at its required level by the internal secretions.

These Glands are usually depleted in cases of Intestinal Toxemia.

The following picture is seen: intestinal toxemia, irritation of vagal center by circulating toxins in the blood, depletion of the Endocrine Glands, gradually decreasing Calcium Fixation in the tissues, lowering of the auto-defensive functions, and an unrestrictive progressing Toxemia.

An essential progress in the treatment of Bronchial Asthma was registered with the introduction of Colonic Treatments: removing putrefactive products from the colon; re-establishing the endocrine balance; and stimulating the detoxicating organs.

Epilepsy is a Functional Nervous Disease, due to either:

1. Organic Lesions associated with pressure; or to
2. Functional derangements, due to a Toxemia; or as often is the case,
3. Due to both, that is, both conditions are present.

In the latter cases there is an excess of toxic wastes, and excessive vago-constriction, and often a rise in arterial tension. These indications call for the removal of toxic wastes by means of a Colonic Flushing to clear up the Auto-Intoxication, and prevent its recurrence. The reduction and proper selection of food is also of great value. Colon Irrigations are a quick, safe, and powerful means to stimulate the kidneys into action. This method has a more powerful diuretic action than any drug. Reports of some of our most prominent surgeons state that 80 % so-called chronic appendicitis should not be operated upon.

These conclusions were reached by post operative pathological examinations.

Colonic Irrigations, and Colonic Solutions overcome a general infection in the caecum and the symptoms disappear. The burden of caring for the absorbed toxins from the bowel falls upon the liver. The constant and ever increasing amount of toxins absorbed from the intestines sooner or later, exhausts the secretory and detoxicative functions of the liver. The most logical way of activating the Liver is to remove its burden by eliminating the absorption of toxic wastes from the bowel.

Colon Irrigation Is Valuable In The Treatment of:

1. Liver Problems.
2. Kidney Problems.
3. 80% of Appendicitis.
4. Toxic Sciatica.
5. High Blood Pressure.
6. Acidosis.
7. Bronchial Asthma.
8. Epilepsy.
9. Chronic Rheumatism.
10. Gout.
11. St. Vitus Dance (involuntary, rapid, jerky movements: chorea).
12. Arthritis.
13. Neuritis.
14. Painful and Stiff Muscles.
15. Migraines.
16. Neuralgias.

May become satisfactory (to physician and patient alike), if judicious Colonic Irrigation, and colonic medication be applied, in accordance with the demands of each individual case. Intestinal Intoxication will cause 80% of these conditions; and what could be more logical, than to remove the toxic wastes, overcome the General Toxemia, and Restore the Large Intestines to Normal Function and Vigour! Colonic Irrigations are now rational, effective and safe from untoward results. It is the Most Common Sense Way to Combat Intestinal Auto-Intoxication and Other Conditions which may have arisen because of Colonic Stasis and Infection. The Health and Correct Function of Every Organ in our System Depends Upon Proper Elimination of Waste and Toxic Products. Irrigations Are Indicated in Practically Every Diseased Condition, as They Establish Proper Elimination, as well as Remove a source of Toxemia, thus aiding to a great extent any other

treatment. Every modern hospital should have proper equipment, and trained technicians to give these treatments. A course of Colonic Irrigations, with toning up of the voluntary and involuntary musculature, is not only valuable in cases of definite disease conditions, but it will greatly raise the health standard, even of those who do not look upon themselves as sick. It is the most efficient method of adding years to the span of life." - Dr C. B. Lamp, MD, in "High Colonic Irrigations", The American Journal of Physical Therapy, July, 1929.

Colon Therapy

"In searching for the cause of Toxemias, and Chronic Infections often too much stress is placed upon certain etiological factors, passing by others of equal or even greater importance with little or no attention to them. Thousands of teeth and tonsils, gall bladders and appendixes have been removed in an endeavor to locate the cause. Recently more attention is being given to the large bowel, and simply marvelous results have been obtained by those who go at their work in a thorough and painstaking way.

Of the conditions which have responded in a greater or less degree to Colon Therapy may be mentioned:

1. **High, and Low Blood Pressure.**
2. **Arthritis.**
3. **Toxic Goitre.**
4. **Migraine.**
5. **Neurasthenia.**
6. **Anemia.**
7. **Asthma.**
8. **Epilepsy.**
9. **Nephritis.**
10. **And many skin diseases.**

Many times the etiology can be traced directly or indirectly to colon disorders.

When other measures have failed, certainly no harm can be done by trying Colonic Therapy. It is in some of these cases where you never expected results that you are liable to get most brilliant results.

The Treatment of Toxemias of Colonic Origin:

1. Cleanse the bowel, and keep it clean.

2. Change the Intestinal Flora.

3. Prescribe a Healthy Diet, which will produce the least toxins if subjected to putrefaction.

4. Correct the pathological conditions in the bowel." - Dr Wm. W. Worster, MD, in "Colonic Therapy", The American Journal of Physical Therapy December, 1929.

3 - The Paramount Importance of Removing All Foci of Infection

"Assuming that **all other Foci of Infection have been Taken Into Account in the Treatment of a Patient, and that there is not the decided response which was expected, there remains one of the Greatest Sources of Toxins in the Whole Body: The Stagnant Colon.**

The Colonic Irrigations rapidly eliminate the poisons, from the colon and provide a mechanical stimulus to the muscular walls.

Check all other possible sources of Foci Infection such as:

1. Teeth.
2. Tonsils.
3. Rectal Crypts.
4. etc.

We insist that the patient take proper breathing exercises and go to the stool by the clock each day. We should like to emphasize the remarkable results obtained in combining Colonic and Osteopathic Therapy, in the cases of Acute Infectious Diseases, and in some of the Acute Intestinal Disorders. Infectious Diseases of childhood respond much more quickly if the intestinal tract is thoroughly cleaned out, and Colonic Irrigations are much more effective than Enemas in this." - in "Making Osteopathy More Effective by the Use of Colonic Therapy", The Journal of the American Osteopathic Association, May 1934.

"Hayden, Rosenow, Lucas and House have established the fact that 80% of all foci of infection is found in the head. There are 44 sources of infection in the head and 32 of them are the teeth. A much greater percentage than 80% of all patients over 35 years of age showing foci of infection by chromography have some form of dental pathosis or oral infection as the main contributing cause of the infection. This is because of lowered resistance by natural metabolic changes. Therefore, it is obvious that after the chromographs reveal foci of infection and the extra ocular tests are completed along with the balance of the complete optometric diagnosis, the case is immediately referred to the oral

surgeon for further diagnosis and attention. The second group of cases showing foci of infection and second in importance in optometric diagnosis are cases of tonsilar origin. We would suspect the tonsils rather than the teeth to be the source of infection in all patients under 30 or 35 years of age and our chromographic evidence followed through confirms this statement.

Clinical analysis indicates that sinus infection is of far less importance than oral and tonsil infection.

While 80% of all Foci of Infection is found in the head there still exists a remainder of 20% of these cases of infection which optometrically we may say make up all abdominal disturbances resulting in infection.

In the locality in which I practice, these abdominal disturbances resulting in infection are important factors to be reckoned with in the study of chromographic evidence of foci of infection.

This is true in all localities where fresh green vegetables are easily obtained and eaten raw, but particularly in the parts of the country where these necessary vegetables are raised. Here those abdominal infections are many because of parasitic infection of the intestinal tract, especially amebic infection.

In a previous paper I mentioned the work being done by many of our modern authorities who are finding the intestinal tract to be the seat of a majority of all cases of foci of infection.

> ***"The entire alimentary tract is a reservoir and laboratory of poison."*** *- Dr W. E. Kessinger, MD*

I believe that if the intestinal tract is kept thoroughly cleansed and free from toxin then body tolerance or resistance to infection is raised so that the infections in other parts of the alimentary system and body are less severe and more easily cared for and removed; also it is more difficult for any toxic agent to lower resistance and gradually become a source of focal infection.

Therefore, I take no issue with these men endeavouring to prove the intestinal tract to be the original seat of foci of infection for it matters not which is the primary and which is the secondary infection if tolerance is reached and the chromographs are normal or toxic free.

As the Toxemia becomes more severe, the red field contracts and as the condition progresses to focal infection the green field contracts.

When the green field reveals foci of infection and the red field is somewhere near the expected norm or slightly contracted and the blue field is small or partly missing (overlapped) then the case is one of foci of infection of abdominal origin and almost invariably the infection may be located in the intestinal tract.

When Foci of Infection breaks resistance entirely, all of the fields will eventually collapse so that they are well within the 15 degree circle, then our evidence is simply Foci of Infection, and that Focal Infection is localized by the process of elimination, exclusion of optometric evidence, diagnosis by the oral

surgeon, and then diagnosis by the diagnostician of internal medicine, or the physician and the abdominal specialist. The Foci of Infection may be listed among those 80% of all cases of Foci of Infection located above the neck and in the head or throat, or the infection may be found in that 20% of cases of foci of infection of abdominal origin and found any place within the abdominal cavity, and may be functional or organic but probably functional. Optometric diagnosis revealed a C, type of case with a chain of toxic interference. Chromography showed Foci of Infection. The patient was referred to the oral surgeon and two impacted third molars and a nonvital cuspid were removed. The chromographs showed an improvement but still revealed a lack of resistance. Another complete physical examination at my insistence resulted in a tonsillectomy. Two weeks after the tonsillectomy chromography revealed normal graphs and good resistance. Orthoptics completed this case and now the patient is assured of eye comfort and safe in the knowledge that the foci of infection which would have continued to contribute to ocular discomfort, with the end result of ocular pathosis or a physical "crack up" has been alleviated.

This patient has a history of poor health throughout her life. She seems a poor risk for foreign service and yet the medical board had pronounced her fit.

As I have stated in a previous paper, 80% of all focal infection is found in the head (Hayden, Rosenow, Lucas) and a much greater percentage than 80% of all patients over 35 years of age showing foci of infection by chromography have some form of dental pathosis or oral infection as the main contributing cause of the infection, therefore, it was obvious that this patient be referred to the oral surgeon. In November and December 1935, 10 patients were referred to me for chromographic examination. 7 of these cases revealed foci of infection, 2 abdominal toxemia and one showed foci of infection and abdominal toxemia.

All 10 cases were found to have ocular involvements causing symptoms of discomfort but were referred for chromographic evidence alone." - Dr Donald J. Mayer, OD, in "The Diagnosis of Foci of Infection by Chromography", American Journal of Optometry, June 1936.

Dental Foci of Infection in Body Diseases

"In 1910 an English physician, William Hunter, indicted American dentistry for the systemic pathology engendered by gold crowns and septic bridgework.

During this same period of crude bacteriologic technics and infrequent roentgenographic examinations Frank Billings and Edward C. Rosenow advanced the theory that Dental Foci of Infection Were Implicated in the Causation of A Number of Systemic Conditions, Particularly in Diseased Conditions of the Joints.

The Relation of Dental Foci of Infection to Systemic Disease

In the spring of 1949, P. S. Hench Reported the Startling Remission of

Symptoms in patients hospitalized for the Treatment of Rheumatoid Arthritis and thereby provided the health professions with a new and intriguing technic of research into the baffling Etiology of a Number of Systemic Disorders.

Much Has Been Written about The Relation of Dental Foci of Infection to Specific Types of Systemic Disease. The Earlier Literature Particularly Reported Many Instances in which Diseases of the Joints, Heart, Kidneys, and Eyes, Were Cured, or Relieved By The Removal of Dental Foci of Infection." - in "The Journal of the American Dental Association", 1951.

Foci Infection in Psychiatric Patients

> ***"The Causal Relationship of Foci of Infection to General Systemic Diseases Was Recognized by Benjamin Rush in 1819 in a case of Arthritis Which Recovered After Removal of Dental Infection. In Pemberton's study of 100 consecutive hospital admissions, he found the Dental and Nose and Throat Foci of Infection to be about the same in incidence (58% and 56%). Dental Foci of Infection were present in a little over 33% of our patients, while 66% of our patients needed Dental Treatment. The next most common focus of infection lay in the Genito-Urinary Tract (22% and 17%) in our study. The most common Foci of Infection in the mouth are in apical or alveolar abscesses in dead or carious teeth, or in root fragments (30%). The diagnosis of apical abscess was based on dental examinations and Roentgen rays. The next most common Focus of Infection in the mouth was pyorrhea (15%). It is striking that 2/3 of our patients Needed Dental Attention of some sort, and that 36% of our group had Dental Caries. Urologic Foci of Infection were found to be present in 17% of the 100 cases examined; 16% had Chronic Prostatitis, 2% non-specific Urethritis and 1% Cry Otitia. Of our paretic patients 33% had a Focus of Infection in the Genito-urinary tract, while only 10% of all our other cases had such an infection. Summary and Conclusions: 239 patients who were hospitalized because of Mental rather than Physical illness, were studied for Foci of Infection. Of these cases, 62.8% Had Foci of Infection Present. It is obvious, with the high incidence of Foci of Infection in physically normal patients, that every patient should have a very careful examination for Foci of Infection. The most common sites of Foci of Infection in our study were the nose and throat (44%), Dental (37%), Gynecologic (22%), Urologic (17%), and Cardiorespiratory (1.6%). The most common nose and throat infection were chronic tonsillitis and chronic sinusitis. The Most Common Dental Infections were Apical Abscesses and Pyorrhea."*** *- in* ***"Foci of Infection in Psychiatric Patients",*** *The American Journal of the Medical Sciences, April 1940.*

"These case reports almost universally agree that the removal of foci of infection produces distinct benefits in the treatment of disease. The removal of foci of infection aids or cures certain diseases." *- in "Journal of Dental Research", February 1931.*

"Certainly physicians, when diseases due to focal infections are present, inform cooperating dentists to eradicate all possible dental foci of infection as thoroughly as possible by whatever methods they consider necessary or advisable. Not infrequently the extirpation or drainage of primary foci of infection is of therapeutic value, affording relief from the conditions and diseases due to focal infection with subsequent improvement in general health." *- in "The Journal of the American Dental Association", August 1952.*

"Enough is known, however, to make certain that the first step in the treatment is to remove the chronic foci of infection. We have seen many recoveries among the acute psychoses occur in 1 day or 2 after the removal of the chronic foci of infection.
It is evident from these considerations that the interpretation of the so-called functional mental disorders is following the course already taken in functional diseases of other organs, i.e., that we have to recognize the physical nature of the disturbance. Practically all of them have impacted molars and other infected teeth.
All of them have infected tonsils. A certain number also have involvement of the gastro-intestinal tract, and infected cervices are not uncommon. The removal of these foci of infection has resulted in marked improvement in these individuals and many of them have been able to leave the hospital and return to their homes and employment and have continued to do well. There is, undoubtedly, some disturbance of the internal secretions which may be caused by chronic foci of infection. It is not only necessary to look out for contagious diseases, malnutrition, etc., but the hidden foci of infection should be located and eliminated." *- in "The defective delinquent and insane, the relation of focal infections to their causation, treatment and prevention", 1921.*

"Perhaps the most common sites for focal infection are the teeth, jaws, tonsils, mastoids, and sinuses generally. Chronic infection of the upper portion of the lungs, the gastro-intestinal tract including the appendix, and the genito-urinary tract is not uncommon. Teeth are bone-like structures set in bone, but they should never be thought of as having an independent existence. As a matter of fact, the peridental membrane and surrounding alveolar structures are amply supplied with blood-vessels and lymphatics connected with the general circulation. This means that bacteria which attack and break down the peridental membrane of a tooth may forthwith be transmitted through the blood-vessels and lymphatics to other organs of the body,

> ***lodging as far away as the kidneys, the knee-joints, etc. It is precisely because infections from teeth may thus be conveyed to other organs of the body that the subject of focal infection is of such importance."*** *- in "Why infections in teeth, tonsils and other organs ", 1926.*

Oral Foci of Infection

"Focal Infection appears to have some injurious effect on the thyroid gland, either directly by means of bacteria or their toxins or their influence on iodine metabolism.

Olsen & Taylor observed a Relationship Between Defective Teeth, and Diseased Tonsils in patients in whom there was no Iodine Deficiency.

Lintz found that 50% of the goiter patients he examined had either infected or extracted teeth, while in the control group the incidence was only 17%.

Specific cases have been reported in which Hyperactive Thyroids were aggravated by Oral Infections, and were Relieved by their Elimination.

Oral Foci of Infection may aggravate a Hyperthyroid condition or result in exacerbations of symptoms associated with hyperfunction of this gland.

A Focus of Infection may act:

1. **As a depot from which bacteria; or their products may be disseminated to remote areas of the body.**
2. **As an area in which organisms from other parts of the body may localize.**
3. **As an additional load on the general resistance of the individual.**

A Focus of Infection may be of systemic importance in one or more of these ways.

Oral Foci of Infection include:

1. **Periodontal foci.**
2. **Periapical foci, including residual areas of infection in edentulous spaces (or jaws).**
3. **The infected vital pulp."** - in "Oral Medicine Diagnosis and Treatment", 1957.

4 - The Paramount Importance of the Advise on Proper Food Choices

The Emunctologist must advise on proper Food Choices, and the combination of same.

> ***"Food certainly has some influence, both through the amount taken and variations in the kind of Food, and one may assume that Poisons present in the Blood on their way to Excretion or destruction must have some effect. These Poisons may be metabolic or absorbed from Bacteria present in the Hollow Viscera. But if these are the only factors, it is curious that they should be so well balanced."*** *- in "British Medical Journal", 2 October 1926.*

The Concept of Totality

> ***"We Should Not Forget that a Body Detoxifies Constantly Through the Liver, and The Best Nutrition Can Maintain an Active Metabolism with the Help of the Liver.***
> ***Thus, The Concept of Totality, will be obeyed in medicine, as It Is Active in Other Living and Non-Living Processes of Nature. The Same Is True In The Field of Nutrition. A Knowledge of the Interrelationships Among Nutrients in a Diet Is Essential. Utilization of One Nutrient May be profoundly Affected by the presence or absence of Another. An Excess or a Shortage of one or more other Nutrients which Interfere with the normal Metabolism of the essential dietary constituent.***
> ***A healthy body can adapt itself to different types of nutrition. It reabsorbs the necessary minerals, vitamins and enzymes as we know from experiments to determine the time for the clinical appearance of one or another vitamin deficiency.***
> ***A sick body has lost this capacity. The Deficiencies Cannot Be Restored As Long As The Essential Organs Are Poisoned. That is true in Cancer also, as demonstrated by Clinical Observations. Cancer Will Be Prevented And Can Be Cured if we learn to Understand the eternal Laws of Totality in Nature, and in our Body."*** *- Dr Max Gerson, MD, in "A Cancer Therapy", 1958.*

Interrelationships Among Nutrients

For example; **Calcium Carbonate, to be absorbed needs both Vitamin D and Magnesium; for their absorption are interconnected. Vitamin D is Essential for Calcium Absorption, and Magnesium helps convert Vitamin D, into its active form, and is involved in the transport of Calcium within cells.**

> ***"Nutrients usually act in a coordinated manner in the body. Intestinal absorption and subsequent metabolism of a particular nutrient, to a certain extent, is dependent on the availability of other nutrients. Magnesium and Vitamin D, are 2 essential nutrients that are necessary for the physiologic functions of various organs. Magnesium assists in the activation of Vitamin D, which helps regulate Calcium and phosphate homeostasis to influence the growth and maintenance of bones. All of the enzymes that metabolize Vitamin D seem to require Magnesium, which acts as a cofactor in the enzymatic reactions in the liver and kidneys. Deficiency in either of these nutrients is reported to be associated with various disorders, such as skeletal deformities, cardiovascular diseases, and metabolic syndrome. It is therefore essential to ensure that the recommended amount of Magnesium is consumed to obtain the optimal benefits of Vitamin D."*** *- in "Role of Magnesium in Vitamin D Activation and Function", Journal of the American Osteopathic Association, 1 March 2018.*

There should be less of inclinations for the individual to so act towards food, drink or activity of any nature, as to cause greater disturbance to the system; as getting too cold or too hot, or the feet becoming damp, or the head and neck and shoulders under draft, or overindulgence in food of the nature that is a reactory influence upon the lower hepatic circulation.

> ***"The cases that die every year are killed by Food and Medicine."*** *- Dr John Tilden, MD in "Appendicitis", 1909.*

A Note on the Emunctory System

> *The Emunctories, are the Sum of all Organ System in the physical body, which within their Functions, Contribute and Participate in the Natural Physiological Process in the Removal of Cell Toxicity, from the Physical Body.*

"It then occurred to me that many an interior complaint suddenly disappeared, as soon as an eruption showed itself on the exterior. Could not, so I asked myself, such an eruption be brought about by artificial means?

In other words, could it not be possible by some means or other to help the Morbid Matters, concealed in the interior of the body, to break through, to entice them, out on the surface of the skin, and so relieve the Water-Cure of a good deal of its work? When the Evacuation of the Bowels is Irregular, in most cases the whole organism is not in order; not only the Stomach or some other particular part (other organs); and I am of the firm conviction, which a great

number of cases have always confirmed, that Water Is The Surest and Most Harmless Remedy to be found on the Earth. It helps by being applied Interiorly, and by being permitted to operate Exteriorly. One of the first questions which the doctor puts to the patient is: Are the Bowels Regular?

If this is so, one has the First Sign of Health; if they are irregular, it is the sign of the commencement of an illness, and if this evil is not remedied, the patient goes to meet an illness, sooner or later, perhaps an early death." - Msg Sebastian Kneipp, in "My Water-Cure, Tested for more than 35 years, and described for the Healing of Diseases and the Preservation of Health", 1891.

> ***"I have not translated words but ideas. And the ideas I have rendered fully and faithfully; on this head I challenge criticism."*** *- Dr Charles J. Hempel, MD in "The Chronic Diseases: Their Specific Nature and their Homeopathic Treatment", 1889.*

> ***"For whatsoever things were Written, Aforetime were Written for our Learning, that we through Patience, and Comfort of the Scriptures might Have Hope."*** *- Romans 15:4*

> ***"Three Factors Make Cancer Fatal:***
> ***1. Continuation of the cause.***
> ***2. Medical Trade efforts to cure (everyone knows that both Radium, and X-Rays are capable of causing cancer).***
> ***3. Fear, and mistaken belief in incurability.***
> ***Cancer is but one result of failure to live healthily: Psychological Turmoil, Wrong Thinking, Vitamin and Mineral Deficiency, and Toxic Accumulation, Are The Causes."*** *- Dr Ulric Williams, MD, Surgeon, in "Hints on Healthy Living", 1934.*

The Place of Food in Emunctology

> ***"What you Eat is going to impact your Immune System."*** *- Dr Aseem Malhotra, MD in "Sky News", March 2020.*

> ***"The connection with low-Vitamin diet is for the barlow and the proven Scurvy.***
> ***After all, it is striking that not all but only a certain number of children fall ill with the same diet. The lack of the Vitamin cannot therefore be the sole triggering cause, there must also be a weakness in the organism that is somehow justified, so that only through the interaction of both factors does the disease break out just as much as an infectious disease, in which the pathogen is also responsible alone does not mean illness.***

> ***Tobler also writes: "We ask to us, whether the organism itself has the ability to build up the vital substance, and whether perhaps the appropriate food only creates the necessary preconditions for its production."*** *- in "Diseases; rickets", Advances in Internal Medicine and Pediatrics, 1922.*
>
> *"Dr John Haddon writes, with reference to Dr Cameron's contribution to the The British Medical Journal of 9 June 1917,* ***on Status Lymphaticus, to suggest that he should, in the treatment of such cases, confine them to one food at a time so as to be sure of its action one way or another. We know, Dr Haddon continues, more now about the physiological action of drugs than we do about that of foods. I find that each food. has not only an action on the several Emunctories, but gives rise to some special symptom. Dr Cameron blames carbohydrates generally, but I find that the several cereals have different effects on the Emunctories; Wheat causes not only intestinal, but renal stasis, and throws a strain on the skin and lungs. I also find that each cereal seems to have some injurious item, and that a mixture of cereals is especially bad, the combined bad item having more effect."*** *- in "Status Lymphaticus", The British Medical Journal, 4 August 1917.*

Dietary Considerations in Disease

"The Dietetic Treatment which has for many years been known as the Gerson Diet, was developed first to relieve my own severe Migraine condition. Then it was successfully applied to patients with allergic conditions such as Asthma as well as Diseases of the Intestinal Tract, and the Liver Pancreas apparatus. By chance a patient with Lupus vulgaris (skin tuberculosis) was cured following the use of the Diet. After this success the Dietetic Treatment was used in all other kinds of Tuberculosis-bones, kidneys, eyes, lungs, and so forth.

It was Highly Favourable In Many Other Chronic Diseases, such as:

1. **Arthritis.**
2. **Heart Diseases.**
3. **Chronic Sinusitis.**
4. **Chronic Ulcers.**
5. **Colitis.**
6. **High Blood Pressure.**
7. **Psoriasis.**
8. **Sclerosis Multiplex.**
9. **And so on.**

The Most Striking Results Were Seen in the Restoration of various kinds of Liver and Gall Bladder Diseases, which could not be influenced by other methods up to the present.

The Great Number of Chronic Diseases which Responded to the Dietetic Treatment, showed clearly that the human body lost part of its resistance and healing power, as he left the way of natural nutrition for generations. The Fundamental Damage Starts with the use of artificial fertilizer for vegetables and fruits as well as for fodder.

Thus the chemically transformed vegetarian and meat nourishment, increasing through generations, transforms the organs and functions of the human body in the wrong direction. Another basic defect lies in the waste of excrements of the cities. Instead of returning the natural manure to the fruit-bearing soil, it is led into the rivers, killing underwater life. The natural cycle is interrupted and mankind has to suffer dearly for the violation. Life in forest and wilderness should teach us the lesson. But we can regain the lost defence and healing power if we return as close as possible to the laws of nature as they are created. Highly concentrated for speedy reaction, they are laid down in the dietetic treatment. The treatment is ineffective in cases with less than 10% lymphocytes in the differential blood count when the phosphorous cannot be brought back into the red blood cells and other tissues; it is also ineffective in patients with advanced liver damage, and, of course, in those who are in extremis. My experience leads me to believe that the Liver is the Centre of the restoration process in those patients who improve strikingly.

If the liver is too far destroyed, then the treatment cannot be effective.

It is Condensed in 3 Surpassing Components:

1. The Elimination of Toxins and Poisons and returning of the displaced "extracellular" Na-group, connected with toxins, poisons, edema, destructive Inflammation, from the tissues, tumors, and organs where it does not belong, into the serum and tissues where it belongs gallbladder with bile ducts, connective tissue, thyroid, stomach mucosa, kidney medulla, tumors, and so on.

2. Bringing back the lost "intracellular" K-group combined with vitamins, enzymes, ferments, sugar, and so forth, into the tissues and organs where it belongs-liver, muscles, heart, brain, kidney cortex, on this basis, iodine, ineffective before, is made effective, continuously added in new amounts.

3. Restoring the differentiation, tonus, tension, oxidation, by activated iodine, where there were before growing tumors and metatases with differentiation, loss of tension, oxidation, loss of resistance and healing power." - Dr Max Gerson, MD, in "Cancer Research: Hearings", on S. 1875, Bill to Mobilize in the World's Outstanding Experts, and Coordinate and Utilize Their Services in a Supreme Endeavor to Discover Means of Curing and Preventing Cancer, U.S. Congress, July 1946.

The Nature of Inflammation

"There is no abnormal condition of the human system or of its various parts, which calls for the physician's or surgeon's aid so frequently as a condition universally designated inflammation.

Every organ, every tissue, from centre to circumference, inclusive, inside or outside, this process is liable to invade with grades of danger, ranging from slightly noticed inconvenience and discomfort, to immediately threatening death. Observing the deranged and diminished action of the secretory system, direct their whole line of treatment to increase the secretions, and obtaining some satisfactory result from that treatment, are ready to assert and maintain that the origin and essence of the disease is chargeable to diminished action of the secretory system, and thus show us quite a plausible philosophy.

The same, or similar conclusions, are reached by those who direct their attention to the altered conditions of the Emunctory System." - in "The Nature of Inflammation", 4 December 1895.

> ***"Emunctories describes organ or ducts with the physiological function that involves draining or removing waste materials from the body.***
>
> ***The Emunctories function to eliminate both the waste produced by the thirty thousand billion body cells and the exogenous toxins absorbed from the environment either deliberately or involuntarily.***
>
> ***Kuhne, in "Nature Cure", 1922, stated that "disease is a unit" that it consists in the accumulation of waste and morbid matter in the system.***
>
> ***Restated in modern scientific idiom, Kuhne postulated that underlying all disease is the accumulation of both toxins, and abnormal organic material (which include cells and cellular components).***
>
> ***The corollary of this postulate, which forms the basis of nature cure, is that the elimination of toxins and abnormal organic material is an important part of the healing process."*** *- in "Integrative Medicine", June 2019.*

Causa Morbi

"Health may be said to be a balance of Vital Power, controlling and harmonizing Structure and Function.

A Cause of Disorder of Health

When a causa morbi is present in the organism, any single organ or system of organs may suffer; it may be the nervous system or the vascular system, the respiratory, the digestive, or the Emunctory System; or an individual organ, for example, the liver, the kidney, or the skin.

The organ which shall be so attacked by the causa morbi will be determined by a variety of circumstances and conditions; e.g. hereditity, diathesis (predisposition, state of the body), season of the year, habits of life, age, etc..

Therefore the same causa morbi may, in 20 individuals, give rise to 20 different diseases.

Sometimes the same causa morbi will be the occasion of several diseases in the same individual; say, for instance:

1. **Disordered function of the Liver**
2. **Diarrhoea**
3. **Catarrh (build-up of mucus)**
4. **Rheumatism**
5. **Eczema**

Sometimes the same causa morbi may operate in succession on several organs; thus, disordered function of the digestive organs may precede, and then may follow, rheumatism, and after rheumatism, eczema; we see such cases by no means infrequently in daily life.

But, it will happen also, that the order of succession of diseases may be reversed." - Sir Erasmus Witson, FRS, in "On Morphoea or Vitiligo", Journal of Cutaneous Medicine and Diseases of the Skin, 1868.

5 - The Advise on the Adequate Vitamin and Mineral Supplementation to the Diet

The Emunctologist must advise on the adequate Vitamin and Mineral Supplementation to the Diet.

Minerals

"Before there were vitamins, before there was food, before there was life, there were minerals. Minerals are the real stuff we are made of, and they act as building stones to all cells in our bodies.

Calcium

Calcium Is A Most Valuable Mineral, and is of Great Benefit for All, and Even More so, to those Recovering from Illness. The bones of the body are mainly composed of Calcium, and this element gives tone to the muscles, while lack of it leads to decay in the bones and teeth.

The human body contains more calcium than any other mineral, over 90% of which is deposited in bones and teeth to keep them strong and hard.

The remainder is essential for healthy blood for a regular heartbeat and the health of the nervous system.

Calcium Deficiency is generally characterized by:

Muscle Cramps, Numbness and Tingling in Arms and Legs.

For optimal Calcium absorption, you need adequate levels of Vitamin D, and a healthy Digestive System to transport Calcium from food into the bloodstream. Magnesium plays a crucial role by helping to convert Vitamin D into its active form, calcitriol, which is essential for calcium absorption Thus Calcium Cannot Be Absorbed if Magnesium, and Vitamin D are Missing.

Iodine

Is required for the proper functioning of the thyroid gland. Iodine plays a major role in regulating the production of energy and stimulates the rate of metabolism, Iodine deficiencies lead to health problems.

Magnesium

Is a powerful agent in the elimination of waste matter from the system. Magnesium deficiencies are quite common with symptoms being nervousness, muscle twitches, confusion and the formation of calcium deposits. Due to its importance within the central nervous system. In the Muscular System, Magnesium has a reputation as a calming, relaxing substance.

Sodium - Sea Salt

Is a necessary constituent of the gastric juices, and is found in all fluids in the body. It is valuable for eliminating acids from the system in general. Sodium keeps other minerals soluble in blood and is involved in muscle expansion and contraction.

Water

Water is an Important Component of the Cells and Tissues, it keeps tissues soft and pliable and acts as a solvent of gases, foods, etc., permitting diffusion of these substances in the body. It is the medium of transport for food absorbed from the alimentary canal. Absorbed Food is carried from the Alimentary Canal, in the Watery Blood Plasma To All Parts of the Body. Water enables Glands to manufacture their particular Secretions, and assists in regulation body temperature. Harmful Waste is carried in Solution to Excretory Organs. The Body Consists of 75% water. Water Is The Most Important Food Intake. Too little attention is placed on this fact. Fluid is needed for assimilation and transmutation of Minerals & Vitamins. Foods and Oxygen cannot be used without Fluids.

> ***"People in their 30's and 40's, are busy building physical deficiencies which are bound to result in serious illnesses later. There is evidence now to indicate that poor eating habits might be responsible for many more types of illness than science ever imagined. Even infertility, mental retardation, heart disease and cancer may be directly related to poor nutrition."*** *- Dr E. Cheraskin, DM, DMD, University of Alabama Dental School*

Mental and Spiritual Neglect Can Cause Illness

Mental Attitude Is Your Responsibility. Neglect in the mental realm can cause trouble in your physical body. Your Spiritual Responsibility Do Not Neglect to Pray, to Meditate, to Contemplate. Neglect in Spiritual Ways: Have you prayed? Did you protect your aura? Every culture, every civilization has had or has a method of protecting the human aura from foreign, undesirable, influences. Honest Prayer makes a Blue Light. A Blue Light is a power, an energy which is of creative nature. Bless your food and the blue light of your blessing will make your food a healing food, bless your water and it will become a healing water. Bless your child and pray over your beloved ones and the blue light will heal the fluid which will reach the very cell, and the cell will obey the light." - in "God Helps Those That Help Themselves", 1984.

Any penetrating light, that of the dry heat, or that, that acts the quickest with the blood stream, as is seen, this is the effect of light; whatever nature that may be applied to a body: All bacilli, or all germs are afraid, of light, or light is destructive to all. Some, accumulate in heat, that is not penetrating.

Hence the variation in the quartz light, the ultra-violet light, the blue light, the red light, each one taking out that, that filters through the system.

Hence the most penetrating without being destructive to the tissue proper.

The Natural Time for the Regeneration of All the Body Tissues

1. It takes 48 Hours to build New Skin in the palm of the hand.

2. The Brain takes weeks to regenerate.

3. Every 90 days the Blood Cells renew.

4. If the correct protocol is adhered to and followed, Hair will re-grow within 9 months.

5. Several Months to Renew: Stomach Walls, Liver Tissue, and Kidneys tissue. The repair process starts immediately after injury, and significant regeneration has been observed between 3 to 4 weeks, after injury on the liver.

6. Every 3 years the Soft Tissues (Organs) Renew.

7. Every 7 years the Hard Tissue (Bones) Renew.

The Brain Regenerates

Researchers at Princeton University in 1999 found that New Neurons were continually being added to the Brain. The Neurons, were added to the cerebral cortex of the brain which is the most complex part of the Brain. The cerebral cortex is responsible for higher level decision making and learning. The formation of new nerve cells, a process called neurogenesis.

When Brain Cells are Injured: They Revert to an Embryonic State

> ***"In the early regenerative (day-14) state, transcriptional networks related to protein translation, energy production and mitochondrial function were activated, suggesting increased cellular activity to support axonal growth. In a 2 week time frame, classical neurodevelopmental events occur that are associated with successful regeneration."*** *- in "Injured adult neurons regress to an embryonic transcriptional growth state", Nature, 15 April 2020.*

Vitamin D, Magnesium, Calcium Carbonate, Iodine and (Sea) Salt

Vitamin D, Magnesium, Calcium Carbonate, Iodine and (Sea) Salt: These 5 substances represent a combination of major minerals, trace elements, and vitamins that interact heavily within the human body for bone health, metabolic regulation, and fluid balance.

These Substances Connect and Interact

The Bone-Building Trio

1. Vitamin D: Essential for absorbing Calcium in the gut; without it, the body cannot effectively use the Calcium
2. Calcium Carbonate: A form of Calcium used to build and maintain bone structure. It requires stomach acid to dissolve.
3. Magnesium: Converts Vitamin D into its active form so it can be used. It also balances Calcium.

The Thyroid and Fluid Duo

1. Iodine: A trace mineral strictly required by the Thyroid Gland to produce Metabolic Hormones.
2. Salt (Sea Salt): Keeps your fluids balanced and helps nerves transmit signals.

These 5 elements are absolutely fundamental to sustaining human life, regulating cellular metabolism, and maintaining structural integrity. Together, they form a biological network where the deficit or excess of one directly disrupts the utility of the others.

The Interdependent Action

1. Vitamin D and Magnesium: Vitamin D cannot function without magnesium. Every single enzyme that metabolises vitamin D in the liver and kidneys requires magnesium as a cofactor. If high doses of vitamin D, are taken, while depleted in magnesium, the body will draw magnesium out of the storage sites (like muscles and bones), worsening a hidden magnesium deficiency.
2. Calcium Carbonate: It serves as the raw material for your skeletal architecture and cellular signaling. However, Calcium relies entirely on vitamin D for intestinal

absorption. Without the active form of vitamin D (which requires magnesium), calcium carbonate cannot be effectively absorbed. Instead, it risk calcifying soft tissues, arteries, or forming kidney stones.

3. Salt (Sea Salt) and Iodine: These two are biologically intertwined. The thyroid gland requires iodine to manufacture thyroxine (T_4) and triiodothyronine (T_3), which dictate the basal metabolic rate of every cell. Iodine deficiency causes severe developmental and thyroid diseases. Meanwhile, the sodium in salt regulates extracellular fluid volume, osmotic pressure, and the electrochemical gradients required for nerve transmission.

Balance And Equilibrium Is the Key To Health

1. Beware: Of too much is as bad as too little, the Equilibrium is the Key to Health.
2. The Renal Flush: High dietary sodium (salt) intake directly increases urinary calcium excretion. The kidneys clear sodium and calcium using the same transport mechanisms; thus, an excess of salt forces the body to dump calcium, accelerating bone loss.
3. The Receptor Competition: Calcium and magnesium utilize the same transport channels in the gastrointestinal tract. Flooding the gut with a high dose of calcium carbonate will competitively inhibit the absorption of magnesium.

Vitamin D and Calcium Aid in Lung Cancer

A large systematic analysis in "Anti-Tumor Effect of Vitamin D Combined with Calcium on Lung Cancer", Nutrition and Cancer, 2021, evaluated over 58,600 lung cancer cases and found that the combination of Vitamin D, and Calcium, has an anti-tumor effect on lung cancer, significantly reduced cancer incidence. Vitamin D aids in Calcium absorption, regulates cell growth, and modulates immune function, while Calcium helps maintain healthy cellular processes.

Vitamin D, Magnesium and Calcium Carbonate Inadequate Intake are Contributing Risk Factors for Various Types of Cancer

> *"A low Vitamin D status and inadequate Calcium intake are contributing risk factors for various types of cancer. Ecological studies using Solar Ultraviolet-B exposure as an index*

of Vitamin D3 Photoproduction in the skin found a highly significant inverse association between Ultraviolet-B and mortality in 15 types of cancer. Of these, colon, rectal, breast, gastric, endometrial, renal and ovarian cancer exhibit a significant inverse relationship between incidence and oral intake of calcium. In addition, lung and endometrial cancer as well as multiple myeloma are considered Calcium and Vitamin D sensitive. Vitamin D and Calcium insufficiency has been implicated in the pathogenesis of the aforementioned types of cancer. A nutritional calcium deficit and a compromised Vitamin D status are risk factors for multiple chronic diseases, including various types of malignancy. A strong association between a low Vitamin D status and cancer incidence or mortality has been reported for colon, rectal, breast, prostate and ovarian cancer. In addition, Vitamin D insufficiency apparently contributes to the pathogenesis of gastric, lung, esophageal, pancreatic, renal and endometrial cancer, as well as non-Hodgkin's lymphoma. There is evidence that poor calcium nutrition is a significant risk factor for total cancer incidence, and, in particular, for colorectal, breast and renal cancer. Low calcium intake may also contribute to the development of gastric, pancreatic and ovarian cancer, and to some extent of endometrial lung and prostate cancer, as well as multiple myeloma. High intake of Vitamin D together with Calcium is relevant not only for cancer prevention and, as is well known, for osteoporosis therapy, but has benefits for many other calcium and Vitamin D insufficiency-related pathologies, including infectious, chronic inflammatory and autoimmune diseases as well as incipient and end-stage cardiovascular disorders." - in "Calcium, Vitamin D and Cancer", Anticancer Research September, 2009.

Vitamin D, Magnesium and Calcium Carbonate Deficits Predispose for Multiple Chronic Conditions

"There is evidence from both observational studies and clinical trials that Calcium Malnutrition and Hypovitaminosis D are predisposing conditions for various common chronic diseases. In addition to skeletal disorders, Calcium and Vitamin D deficits increase the risk of malignancies, particularly of colon, breast and prostate gland, of chronic inflammatory and autoimmune diseases, as well as of metabolic disorders (metabolic syndrome, hypertension). Calcium Malnutrition eventually causes a decrease in Calcium concentration in extracellular fluid compartments, resulting in organ-specific modulation of calcium-sensing receptor activity. Hence, attenuation of signal transduction from the ligand-activated Vitamin D receptor and Calcium-sensing receptor seems to be the prime mechanism by which Calcium and Vitamin D insufficiencies cause perturbation of cellular functions in bone, kidney, intestine, mammary and prostate glands, endocrine pancreas, vascular endothelium, and, importantly, in the immune system. Wide range of

> *diseases associated with deficits in Calcium and Vitamin D in combination with the high prevalence of these conditions." - in "Vitamin D and Calcium Deficits predispose for Multiple chronic diseases", European Journal of Clinical Investigation, May 2005.*

6 - The Advise on the Need for Osteopathic Manipulations

The Emunctologist must then advise on the need for correct Osteopathic Manipulations: First And Foremost; to improve Lymphatic Circulation, and Secondly the Blood Circulation. These Osteopathic Manipulations are given, as well for the benefit of improving stimulation of the nerve supply, these should be Neuropathically given, with the final aim of restoring the balance between the Sympathetic, and the Cerebrospinal System (Central Nervous System; which consists of the Brain and Spinal Cord). The Sympathetic System lies parallel with the Cerebrospinal, making direct connections in Centers along the Cerebrospinal System. For the force that vivifies the physical body, and controls the Nervous System of the body Is The Soul of each individual. It is this Life Force (Electrical in Essence) that controls the physical body via the Nervous System. The Emunctologist should be aware, must be aware that the Physical Body has Nerve Centers, particularly when identifying pathological factors requiring for its resolution, Manual Therapy such as: Osteopathy, Chiropractic, Neuropathy, Massage); or Electrotherapy with the correct and specific attachments from appliances to these very same centres. The concept of ganglia as centres is the basis for the sympathetic nervous system with its own primary centre (the Solar Plexus Brain or Abdominal Brain).

> ***"The priority of the sympathetic nerves, over the cerebro-spinal is evident and signifies their import in the continuance of the vital forces of life. The Ganglia are Little Brains, for they all have the elements of the cranial cerebrum; nerve cells and processes. In short every nerve cell is a unit in itself. It is an isolated anatomic unit, a neuron, a brain and a reorganizing center. The essential of the cell is the nucleus because it has the power of nutrition, hence reproduction. Hence each ganglion is a little brain, a reorganizing center. The ganglia, composed of nerve cells, are little brains, they are reorganizing centers, receiving sensations and sending out motion. Thus, the ganglia of the sympathetic nerve are little brains; i. e., they receive sensation, emit motion, and control secretion. They are trophic centers, and possess vaso-motor power. They are centers for reflex action, and are endowed with a peculiar quality called rhythm. The abdominal and pelvic brains and the ganglionic plexuses are simply***

> ***large brains or aggregations of nerve cells."*** *- Dr Byron Robinson, MD, in "The Abdominal Brain and Automatic Visceral Ganglia", 1907.*

The Nerves that originate from the Cerebrospinal Axis, or Peripheral (Sympathetic Ganglia), have their Own Distinct Role. Thus, the Emunctologist will find that all organs are connected by Bidirectional Axis. The human body does not operate as a collection of isolated parts. Instead; it functions as a Network of Bidirectional Axes; where Every Organ constantly "talks" to and "listens" to every other organ. These Axis are at the centres where the nerves connect. Two of the most important Nerve Centres, are the Pneumogastric, and Hypogastric. Known the Pineal Nerve has also its systemic influence. Thus the Emunctologist should known that the lack of coordination; leads necessarily to incoordination between the Cerebrospinal Nervous System, and the Sympathetic Nervous System (Vegetative Nerve System), this incoordination is a Major Pathophysiological Factor in Several Health Conditions. [Please see Chapters 11 and 35]

The Nerve Force and Anesthesia

"Nerve Pulse Propagation and Anesthesia: Both Nerve Activity and the Action of Anesthetics can be understood on the basis of simple physical laws. It was found experimentally that biological membranes melt from a solid state to a liquid state just below physiological temperature. Such melting processes have a profound influence on the physical properties of cell membranes. They make it possible for mechanical pulses (solitons) to travel along nerve axons. In these pulses, a region of solid phase travels in the liquid nerve membrane. These pulses display many properties associated with the action potential in nerves. Both general and local anesthetics lower melting temperatures of membranes. Thus, they make it more difficult to excite the nerve membrane. Since hydrostatic pressure increases melting temperatures, it counteracts anesthesia. This theory has the virtue of providing a simple explanation of the famous Meyer-Overton correlation, which states that the effectiveness of an anesthetic is proportional to its solubility in the lipid membranes of cells. We offer evidence that this concept if also applicable to local anesthesia. The miracle of the appropriateness of the language of mathematics for the formulation of the laws of physics is a wonderful gift. The laws of physics, expressed in a mathematical language, are universal. They apply to anything ranging from small sub-atomic particles to very large galaxies. Ion currents can

flow along the nerve or through the nerve membrane. Hodgkin and Huxley proposed that sodium and potassium currents pass through ion-specific channel proteins called Na-channels and K-channels, respectively. The electrical resistance of these channels is assumed to be a function of voltage, and this property leads to the possibility that a localized pulse of electrical activity can travel along the nerve axon. One can measure small electrical currents through the cell membrane. These currents are not constant, but rather display distinct on-off characteristics that have been associated with the opening and closing of ion channel proteins." - in "Nerves and Anesthesia: A physics perspective on medicine", 8 September 2014.

> ***"Reactions to agents employed in regional Anesthesia are quite frequent. Seevers has stated that local Anesthetics cause more deaths than does any other class of commonly used drugs. Many are mild and self-limited but fatalities do occur. Most frequently the mild reactions are ignored or considered inconsequential and this attitude is foolhardy. The mild reactions should be considered as warning signals, as evidence of an untoward response that may be the precursor of a more severe type reaction which can jeopardize the patient's life."*** *- in "Fundamentals of Nerve Blocking", London, 1960.*

7 -The Advise on the Need for Chiropractic Adjustments

The Emunctologist must advise on the need for correct Chiropractic Adjustments, these to remove any Subluxation (displacement of bone from its normal neutral position).

> ***"One or more vertebrae of the spine may or may not go out of place. They might give way very little, and if they do, they are likely to produce serious complications and even death, if not properly adjusted, many diseases are related to the spine."*** *- Hippocrates, Greek Physician established School of Healing, Island of Cos.*

> ***"The reason why Manipulation, especially Spinal, lies under a cloud today, is not that it is ineffective, everyone knows of cases where it was dramatically successful; but that it is carried out by people of whom doctors disapprove."*** *- Dr James Cyriax, MD, in "General Practitioner"*

Keep a well-rounded, a well balanced life; in Physical Exercise, in Physical Rest, and in Mental Application.

Chiropractic and The Nervous System

"The Landmark Discovery: On 18 September 1895, D. D. Palmer, talked to his building maintenance man, Harvey Lillard, and found that he had to shout to him in order to be heard. He inquired of Harvey about the cause of his deafness.

Harvey explained that 17 years previously, when he was exerting himself in a bent over, and cramped position, he felt a pain in his upper back; after which he lost his hearing. Palmer examined him, and found a painful, prominent vertebra in Harvey's upper back which appeared out of alignment.

On pressing it, Harvey exclaimed:

> ***"Yes, This was the same Bone that Hurt when he Lost his Hearing."***

Dr Paul Bechgaard, MD, Professor of Internal Medicine of the University of Aarhus, Denmark, described his clinical experience using Spinal Adjustments on patients who suffered Deafness, in "Nordisk Medicin", 6 June 1963.

Described a case in which a 54 year old **man suffering from lumbago, and a long-standing Hearing Defect (7 years) was given Spinal Adjustment.**

A marked improvement in his hearing ability resulted and it was found that the blood supply to the "organ of Corti" in the ear had been impaired by irritation of nerves leading from the upper spine.

The ear specialist by whom the patient had been treated previously and unsuccessfully, examined the patient and verified that the patient's hearing had been restored. Dr Bechgaard, also reported good results in 6 similar cases, treated in the following year, by Spinal Adjustment. It was his opinion, that **the cause of the Hearing Defect was the impaired blood supply to the organ of Corti, and that this Impairment of Circulation was caused by an Irritation of the Sympathetic Nerves leading from the upper thoracic spine.**

> ***"The patient had no symptoms referable to the head or neck until he had been injured when he gradually developed a Meniere's syndrome consisting of unilateral deafness, tinnitus and vertigo so severe that he almost always vomited, and the only relief he obtained was going to bed. At first he was treated by manipulation of his stiffened neck joints and although this did not help, the relief was transient and very far from complete. When the thoracic spine was examined, the lesion at T4, T5 was found and manipulative treatment to this joint resulted in dramatic and lasting relief of all symptoms referred to, including the deafness. It may be that the anatomist's***

> ***description of the sympathetic supply to the head and neck is incomplete or that there are some unknown factors."*** *- Dr John Bourdillon, FRCS, in "Spinal Manipulation", 1982.*

He is the past president of the North American Academy of Manipulative Medicine, an English orthopedic surgeon. Doctor Ussher **found a direct connection between diseases of the internal organs of the body and spinal distortions.** He confined his Treatment of the patients, **to Spinal Manipulation to correct the spinal distortions and misalignments, and was able to correct many of the disorders of the internal organs in over 400 patients.**

He reported as having Treated, and Cured such Ailments as:

1. **Occipital and Frontal Neuralgia.**
2. **Bronchial Asthma.**
3. **Cardiac arrhythmias and changes in cardiac circulation.**
4. **Spasm of the cardiac sphincter of the esophagus.**
5. **Pylorospasm of the intestine.**
6. **Functional disturbances diagnosed as chronic Appendicitis.**
7. **Intestinal colic.**
8. **Colitis.**
9. **Spasm of the sigmoid and rectum causing Constipation;**
10. **Urethral Spasm.**
11. **Urinary frequency and urgency.**
12. **Etc...**

Doctor Henry Winsor, MD dissected a total of 50 human cadavers to see if there was any relationship between any diseased organs discovered on autopsy, and the vertebrae associated with the nerves that went to the organs.

> ***"The object of these necropsies was to determine whether any connection existed between minor curvatures of the spine on one hand, and diseased organs on the other; or whether the two are entirely independent of each other. All curvatures and deformities of the spine were rigid, apparently of long duration, irreducible by ordinary manual force. Extension, counter-extension, rotation, even strong lateral movements failed to move them to change positions. [This was because of arthritic changes in the vertebrae]. The organs were in many instances affected by acute disease, while the deformed vertebrae proved that the curvatures preceded the organic disease, though theoretically, reflexes through muscle spasm may reverse the order of***

> ***precedence."*** *- Dr Henry Winsor, MD, in "The Evidences of the Association, in Dissected Cadavers, of Visceral Disease with Vertebral Deformities of the Same Sympathetic Segments", Medical Times, 1921.*

Upon opening up the bodies of those persons who had died of Heart Disease, and had traced the nerve from the heart back to the spine, he found in every case (but 2), that the cause of death, was also found in the area of the spine that was most misaligned and damaged by disease. His report showed that there was nearly 100% correlation between minor curvatures of the spine and disease of the internal organs." - in **"Are Epidemics and Vaccinations Billion Dollar Scams"**, 2010.

> ***"Once the varying anatomic features were recognized, it became apparent that the position of the organs in the body was of importance for their function. This led to that which is now called body mechanics or the function of all parts of the human body, bones, joints, muscles, viscera and nerves. This naturally deals largely with the general physiology of the body. This study has shown that many of the other chronic diseases are probably part of the disturbances which at times result in arthritis or the progressive paralyses but at other times may result in diabetes, the chronic blood diseases, various skin lesions or cardiorenal diseases. With the general increase in the common chronic diseases, it would seem possible that a study of anatomy, body mechanics and physiology in these cases might be of help."*** *- Dr Joel Ernest Goldthwait, MD, in "Essentials of Body Mechanics in Health and Disease", 1945.*

8 - There is a Mind, even a Soul, behind the face of each Individual

> ***"For As The Body Without The Spirit is Dead."*** *- James 2:26*

The Emunctologist should remember that there is a Mind, even a Soul, behind the face of each Individual. Man, is not meant To Live Neither in Isolation, nor Without a Purpose, thus advise accordingly.

Thus, to treat many conditions, one must necessarily understand, and have a good grasp of the mechanisms, in the Body-Soul connection.

> ***"Statistics prove that married persons on average, are longer lived than single ones, and my own observation has convinced me that they are more exempt from disease."*** *- Dr Frederick Hollick, MD, in "Facts for the feeble", 1885.*

"A knowledge of the whole human being sufficiently thorough to permit an intelligent interpretation of all its possible conditions of health and disease, as well as the proper course to pursue when disorders arise, is so absolutely essential, as a safeguard against every variety of delusion and imposition as to be a necessary part of everyone's education.

A large part of our miseries, agonies and unhappiness generally comes from misunderstandings, which are mainly the result of ignorance. Manual Therapeutics, has achieved a widespread appreciation of its own merits, and Suggestive Therapeutics has grown to such substantial proportions as to clamour for universal recognition, while the old, time honoured temple of medicine has industriously striven to meet the ever-changing and increasing wants of humanity to the best of its ability.

Each means of cure has its appropriate field of operation, and all possible remedial measures that have been found helpful in the healing of the sick are sorely needed in the great campaign of humanity against disease and premature decay. There should be no rivalry between the various methods of cure, but, on the contrary, they should enjoy mutual appreciation and helpfulness.

This desirable state of affairs can be attained only when the nature of man, both Physical and Spiritual, is better understood. So long as one set of healers has a care merely for the Physical Part of the human being, ignoring, as far as possible, all consideration of his Spiritual Nature, and necessities, and another set refuses to recognize the claims of man's material part, but hopes to rescue humanity from its aches and pains by purely psychological processes, sick humanity can have little hope of perfect and permanent recovery.

But when the dual nature of man, becomes universally recognized and the fact that, so far as his present existence is concerned, he is not a mere; Body nor a mere Soul, but Both, and that each acts and reacts, upon the other in both health and disease, becomes universally appreciated, Practical Medicine, Manual Therapeutics and Suggestive Therapeutics can sit down in friendly counsel with some hope of successfully solving the great problem of humanity's emancipation from the thralldom of Sickness, and Suffering.

The study of Anatomy, as it is now carried on by any means complete, for it ignores all consideration of the 2 Spiritual Forms:

1. **The Conscious, and the**
2. **Sub-Conscious shapes, without which what remains is but a corpse — a man, indeed, with the man left out.**

The existence of Man's Spiritual Parts as essential elements in all that concerns his every possible condition." - Dr E. H. Pratt, MD, in "The Composite Man", 1901.

"When we consider the individual (and we should be eternally grateful to Hahnemann that he always dealt with the sick individuals and not with the diseases), we find 2 quite different parts; the Head, and the Metabolic parts. They stand opposite one another even in the it anatomical structure, and one part has a counteraction on the other if a worrying excitable person develops a duodenal ulcer, etc. This interaction should be held in mind." *- Dr Lees, MD, in* ***"The Role of Bowel Flora in Chronic Disease"****, The British Homeopathic Journal, January 1949.*

"Man has a Soul which is his real self; a Divine, Mighty Being, a Son of the Creator of all things, of which the Body, although the earthly temple of that Soul, is but the minutest reflection: that our Soul, our Divinity Who resides in and around us, lays down for us our lives as He wishes them to be ordered and, so far as we will allow, ever guides, protects and encourages us, watchful and beneficent to lead us always for our utmost advantage: that He, our Higher Self, being a spark of the Almighty, is thereby invincible and immortal. We must realise that the short passage on this earth, which we know as life, is but a moment in the course of our evolution, we must realise that the short passage on this earth, which we know as life, is but a moment in the course of our evolution, as one day at school is to a life. The next Great Principle Is The Understanding of the Unity of All Things: that the Creator of All Things Is Love, and that everything of which we are conscious is in all its infinite number of forms A Manifestation of That Love." *- Dr Edward Bach MD, in "Heal Thyself: An Explanation of the Real Cause and Cure of Disease", 1931.*

"They that be whole need not a physician, but they that are sick." *- Matthew 9:12*
"To Understand Disease; its object, its nature, and its cure: we must in part comprehend the reason of our being and the laws of our Creator in relation to us.
It Is Essential to Realise that Man has 2 Aspects: 1. Spiritual and 2. Physical; and that of these 2, the physical is infinitely the less important. Under the guidance of our Spiritual Self, our Immortal Life, Man is born to gain knowledge and experience; and to perfect himself as a physical being. The physical body alone, without communion with the Spiritual, is as an Empty Shell, a cork upon the waters, but When There Is Union, Life Is A Joy, an adventure of absorbing interest; a journey yielding Happiness, Health and Knowledge. Our evolution began as a new born babe, without knowledge, and with the whole interest self-centred. Desires being limited to comfort,

> ***food and warmth. Then as we advance comes the desire for power, and so for a time, we continue to be self-centred, desiring only our own gain, and worldly ambitions." -*** *Dr Edward Bach, MD, in* **"Some Fundamental Considerations of Disease & Cure"**, *Homeopathic World, 1930.*

The Emunctologist should be aware that: In the Physical Body, some affections or conditions do arise, partially, from a karmic relationship.

The Vital and Immortal Principle

"Every kindly smile, every kindly thought and action; every deed done for love or sympathy or compassion of others proves that there is something greater within us, than that we see. That we carry a Spark of the Divine, that within us resides a Vital and Immortal Principle. And the more that Spark of Divinity shines within us, the more our lives radiate Its sympathy, Its compassion: and Its love. The more we are beloved by our fellow-men and fingers are pointed at us and the words are said: "There goes a God-like man". The amount of peace, of happiness, of joy, of health and of well-being that comes into our lives depends also on the amount of which the Divine Spark can enter and illuminate our existence. From time immemorial, man has looked at 2 great sources for Healing. The mind is the most sensitive part of our bodies, and hence the best guide to tell us what remedy is required. To his Maker, and to the Herbs of the field, which his Maker has placed for the relief of those who suffer. Yet one Truth has mostly been forgotten. That those Herbs of the field placed for Healing, by comforting, by soothing, by relieving our cares, our anxieties, bring us nearer to the Divinity within. And it is that increase of the Divinity within which heals us. It is a very wonderful thought, but **it is absolutely true, that certain Herbs, by bringing us solace, bring us closer to our Divinity: and this is shown again and again in that the sick not only recover from their malady, but in so doing, peace, hope, joy, sympathy and compassion enter into their lives; or if these qualities had been there before, become much increased.**

Thus we can truly say that certain Herbs have been placed for us by Divine Means, and the help which they give to us, not only heals our bodies, but brings into our lives, our characters, attributes of our Divinity.

It is as though in this vast civilisation of today, a civilisation of great stress and strain, the turmoil has been such that **we have become too far parted from the true Source of Healing, Our Divinity.**

Yet our Maker, knowing these things, took compassion upon us, and in His

Mercy provided a substitute means to heal our infirmities until when time or circumstance shall restore the genuine and direct. It is certain that **it is increased harmony between the Greater Self within, and the body without which has affected the cure. Herbs remove such and by so doing not only close the door to the entrance of disease, but make our lives happier, more joyous and more useful,** and what greater is there amongst all the Noble Arts than that of Healing, and what more befitting to the Brotherhood of Man than, like some of the Orders of Old, to carry ease to those in pain; solace to those in trial or distress; and comfort and hope to all those afflicted. **And these Remedies place in the hands of everyone the power to do these things. Not of their own power, but of the Power vested by the Great Creator in His Healing Herbs."** - Dr Edward Bach, MD, in "Wallingford Lecture", 1936.

He Is The Way

It is the will or the choice to apply self in relationship to the influences of the divine nature in the experience that makes for the growth, the development.

For ever the purpose of the entrance into materiality is to manifest the love of the Father as it may become a material application to the children of men; or the whole purpose may be included in these words:

> ***"As ye do it unto these, thy brethren, ye do it unto me."***

Hence the purposes in an experience are for the development of those forces and influences as to make or cause the whole of the entity's being, soul-body, soul-mind; to become more God-like, Christ-like.

For we each are not aliens but sons and daughters of the Father, and we should manifest ourselves in such measures as to be worthy of same - even as has been shown in Him, Jesus the man, Jesus the Christ; by the activities, by that meted to the world. Though the world rejected Him oft, He gave all.

His activities then are ensamples. Hence He is the way. And these the individual soul must manifest. For the high mental forces, if they are ever tempered with spiritual constructiveness; become as the means for not only giving of self in service in such a manner, but by the very application grow more and more in that consciousness of the self and soul being unfolded to the awareness of the divine within. Service, then, is that to which must arise as a key to the every mental, material and spiritual accomplishment.

Greater understanding and comprehension may come if those tenets of Him Who Is the Light, The Hope, The Way, are sought and applied. Keep in that Light, in Every way, that there may come the closer walks with Him, the closer concepts of spiritual understanding and application in the dealings with thy fellow man.

Keep thy heart and mind in the love of the Christ-Consciousness.

This will bring the greater joys in thine own material experience.

> ***"And he arose out of the synagogue, and entered into Simon's house.***
> ***And Simon's wife's mother was taken with a great fever; and they besought him for her. And he stood over her, and rebuked the fever; and it left her: and immediately she arose and ministered unto them. Now when the sun was setting, all they that had any sick with divers diseases brought them unto him; and he laid his hands on every one of them, and healed them."*** *- Luke 4:38-40, The Holy Bible Rectified Text*

A Clearer Understanding of the Healing Forces

Know what is the Name of your Healer: That Name above every other name! As that Name, named by self, that brings Healing in the physical self, in an experience. So may self, by holding, attaining, gaining that consciousness of the indwelling, and communion of that; Self-Same Spirit, bring Aid, bring Help, bring Hope and Faith, to Another. For the Emunctologist to be an instrument, to give other Healing: That self be wholly free in that source of power, as would bring Hope, Faith, Confidence, and Healing to those who Seek through the Principles given in Emunctology, to be made more aware of His love, in their lives. Not in arrogance by any one; rather seek through meditation, singleness of purpose, to be guided in that channel in which each may Be a channel of blessing to those who seek. In this manner may ye know the way; for, as has been given: "I go; and the Way ye know." The manner in which each may know they are In attune, is the ability to feel that consciousness of the sincere desire Within to Be a blessing, A channel, to someone. One must raise self to that consciousness, of a physical perfection, in spirit, to give the proper attitude or concept to another.

Doubt never Accomplished anything. Will the body-consciousness intend or desire, that may Be a portion of the individuals work. This will be accomplished by a unison of cosmic or universal forces. This may be raised in

Anyone that so Cleanses their Own physical consciousness, or raises the vibrations of their own physical bodies; to that attunement that brings Healing to others.

For, as has been given:

> ***"Who healeth all thine infirmities? Who bringeth the hope, the abounding forces of love, in thine life?"*** *- Psalm 103:3, The Holy Bible Rectified Text*

What Is Life?

It Is Opportunity to Serve the Living God! Life Is Vibration, when Vibration Ceases; so it does Life. If the Electrical Vibration Is Kept On; there is No End to Life. There's no ending! Is there an Ending in life? an ending in vibration? It is Vibration that was created.

As has been given:

> ***"Though I give my body to be burned and have not love, it profiteth me nothing. Though I may be able to interpret, though I may prophesy, though I may Bring that faith so as to remove Mountains, and have not Love, it is Nothing!"*** *- 1 Corinthians 13:3, Rectified Bible*

Then, first know what love meaneth:

> ***"For God so Loved the world that He gave His Son, that we Through Him might have life, and have it more abundantly. From the abundance of the heart the Mouth speaketh."*** *- John 3:16, The Holy Bible Rectified Text*

Thoughts Are deeds, and as their currents run bring either those of Miracles or crimes. As He purged His own life, so may We purge Our lives, that they may be one In Him, and as He laid His Hands on Many, so may the Healing From self be to many, wilt thou Believe and ask in His name. Be thou, then, the Sturdy, Staunch Guide To Many, as thou wert in days that were counted as but naught!

For while Law is Love, Love Is Law. And as healing is the contradiction of Many man made laws, and in line with, and contradictory to, laws that are universal, the last to be conquered is death itself.

Overcome, even as He overcame. So the injunction, Heal even as Peter, that:

"In His name may This be done. In His name give I thee that sought." - Acts 3:6

He Is the law. He Is the destiny. He Is the love.

Hence, this consciousness of His Presence Must be the Basis of All Healing; for: "Be not afraid, it is I", must come To the Emunctologist, as they make their selves One in purpose. Then, Ask Only in His name, believing, and it Shall be done! This an outcome, or the result of self's own development, and, as given in the beginning; let No one come condemning Themselves for that, that is within them! But let no one come in arrogance, as to that, that's necessary for another to reach that Same attunement! Physically, there may be an illustration in this: Attunements on any of the radios may be Somewhere Near the same point, but no 2 will Ever be in exact same ratio! For their Positions alter that, even when sitting side by side! So, individual attuning their soul-consciousness to the divine within, must attune according to their Own development one in another!

But Condemn Not, that ye be not condemned! Find Good in all! If thou cannot speak well, speak not at all! And think not at all! For thoughts Are deeds.

As ye act, let that gladness of purpose as may be One in all, be that, that rules, or is guided by Him that rules. Rule not in the sense that: "Here's a line, and it must be hewed to, irrespective of consequences or of conditions!"

For He is Also a God of mercy; Mercy that makes us All akin, in that; he that would have mercy shown Must himself be merciful!

Being named and called to be an Emunctologist, a Healer, in what way, and manner are you able to Heal?

Here, let's analyse Healing for the moment, to those that must consciously see and reason, see a material demonstration! Each atomic force of a physical body is made up of its units of positive and negative forces, that brings it into a Material plane. These are of the Ether, or Atomic Forces, being Electrical in nature, as they enter into a material basis, or become Matter, in its ability to take on or throw off. So, as an Emunctologist, may raise the atomic vibrations, that make for those positive forces, as bring divine forces in action into a material plane, those that are destructive are broken down by the raising of that vibration! That's Material.

This is Done through Creative Forces, which are God in manifestation!

Hence, as self brings those Little things necessary, as each is found to be necessary, for position, posture, time, period, place, name, understanding, the Emunctologist mus Study each, and assist each in their respective sphere.

So does the Emunctologist Become a Healer.

As the Emunctologist development is, that there must be raised in each individual that consciousness of the indwelling, or the Superseding of the Christ Consciousness, So, all these receive their consideration, as has been given: To whom ye speak, How ye speak, where, when, and How; these

Must All Be considered, would one Not become arrogant, would one Not become self-centered, self-condemning.

Self surrendering first; then raise the consciousness that will supersede, will overcome, for only in His name may the world, and Its environs be overcome; for, as He overcame even death. So may Ye in His name overcome the ills that the flesh is heir to, through its advent into a material world.

> ***"I am Not of this world. Ye are not of this world, if Ye abide in me, but I may only be Manifest in the material world through thine Own raising of that consciousness. As I abide in the Father, and ye abide in me, I in ye, ye in me, we may bring that to pass As ye seek."*** *- in "Christ-Consciousness", The Book of Emmanuel or God among men.*

Remember; there must first be the Desire on the part Of the one to be healed! You cannot create them, no matter what thou hast! God cannot save a man that would Not be saved!

> ***"Let them seek, not ye prepare or present to them without their seeking."***

The Therapeutic Importance of The Mental Attitude

"It has always been recognized that the confidence and co-operation of the patient were generally essential for success. If an attitude of confident expectancy in the patient be the most essential element of success. What extent States in Consciousness, and Subconsciousness Influence the Activities of the Tissue Cells; or to what Degree those Deepest Physiological Processes, which we usually describe as Automatic Reflexes, and Physical Adjustments, May Be Modified By The Mental Attitude.

The report of 1 May 1914, after long investigation by the joint committee in England, of leading medical men, and prominent theologians, **Confirming the Efficacy of Mental Treatment ,and qualifying its use.**

Sir Thomas C. Clouston, MD, in "Mind Cure from a Scientific Point of View", Quarterly Review, January 1913, states:

> ***"The brain is the controlling organ of the whole body, its master in movement, sensibility, nutrition and general health."***

He states that through the mind glandular secretion is stimulated, pain, paralysis and disease are produced, resistance to infection is lessened and immunity acquired.

He quotes John Hunter as saying:

> ***"As a state of mind is capable of producing a disease, another state of mind may effect its cure."***

Many investigators and clinicians have demonstrated, by practical experiment and experience in direct suggestion, hypnosis, hysteria and other mental conditions that, through consciousness the nutrition, the circulation, and the sensory activity of a part can be modified. Therefore, through consciousness this trophic energy, and so the general condition of a part, can be influenced.

But if **consciousness acting in and through the nervous system is a constantly active cause affecting the physical activities of the tissues**, we should plainly see in ourselves, and in others, the direct influence of states in consciousness.

I believe that such an influence can be demonstrated to be constantly active, but in order to properly interpret it we must have some comprehension of the processes of effective mental action. **Experience of the past, ideas and sensations that have been presented to the individual consciousness, remain thereafter actively present in the mind as potential, impulsive elements.**

It is possible for only an infinitely small proportion of these elements to be individually present in full consciousness at any one moment in time, but grouped and arranged through their associations into complexes, constellations, etc., they fall below the threshold of ordinary consciousness and become co-conscious or unconscious potential activities; indeed such submerged complexes, while still potentially effective, may, from many causes, become so deeply buried as to be lost to ordinary recollection.

These accumulated and generally subconscious activities result in the compounding of what we may term the Mental Attitude, and this Mental Attitude is the effective agent of consciousness, which in its functioning manifests the direct influence of past experiences. These potential centres may

be stimulated into functional activity through the recurrence of some previously experienced ideational or sensory impression which, through accidental relationship, misdirected attention or direct volition became associated with the special submerged complex, and now acts directly to arouse its energy. Thus, we discover that it is not the present conscious thought that directs the creative energy of the mind, but this deeper and more complicated Mental Attitude.

The Mental Attitude constantly varies as its composition changes, but it tends to become more and more fixed and stable in its influence and more and more automatic in its action. In all this we find the key to the cause of most of the subjective occurrences of life: to character, to habit, and to the other elements of personality. Thus, we can see how a submerged complex is frequently the cause of definite abnormal conditions of mind and body, and how forgotten and innocuous incidents in the past have become, through the law of the association of ideas, the effective initiating agents of serious pathological condition. In this way some one of an infinite variety of ideas concerning life, health, or disease may easily become the dominating element of a constantly functioning complex. For example: **a complex may evolve about some idea of ability, of power of self-control, or some fear of disease or failure, some early acquired prejudice or antagonism, or some accidentally aroused antipathy.**

Any such complex may constantly functionate, or may at any time be Aroused by a Stimulus Effective Through Association, and any such Mental Attitude, may become active while The Relationship Between the Stimulus, and the Effective Idea, remains quite unrecognized, and indeed unknown in consciousness. Pathological Conditions Originating From Submerged Ideas Are So Common In Daily Clinical Experience. Not only Do Mental Diseases Begin In This Way, But Many Physical Disorders, Are the Direct Result of Abnormal Mental Attitudes. Thus in submerged complexes; We Often Find the Causes of Disturbances of Circulation, Digestion and Respiration, and of many Convulsive and Spasmodic Conditions, such as: Asthma, Hay Fever, Diarrheas, Nauseas, Various Neuralgias, and Other Disorders.

We constantly see: Warts Removed, Rheumatism Cured, Palsies, and Neuralgia Relieved, by some simple and often absurd process which catches the attention of the subject, and Changes the Controlling Mental Attitude.

Many cures wrought by these various strange measures are well authenticated, and it is a suicidal mistake of our profession to shirk analysing them. We gain nothing by hiding behind such words as “bosh”, “fraud”, “deception”, or “humbug”, on the one hand, and “hysteria” or imagination” on the other. The study of these phenomena and the application of the scientific

principles underlying them, are the Science of Psychotherapy. Every physician practices this science, for we all recognize that all our knowledge and all our work will be practically ineffectual if we cannot gain the confidence of the patient either in ourselves or in our work or in our remedies.

Psychotherapy is, therefore, not a new field. It is the oldest field of all, as its principles alone survive the constant change in medical and surgical procedure.

Scientific Psychotherapy is still in the experimental stage.

We can, however, state clearly these conclusions:

1. Many abnormal physical and mental conditions are due to injurious Mental Attitudes produced by the presence of irrational complexes.

2. The important step towards relief is to discover, through mental analysis, the nature and the origin of the injurious complexes.

3. To bring about relief from the unhealthy conditions, it is necessary to dissociate these abnormal complexes from the normal elements of consciousness, to disintegrate them, and to reintegrate their elements in association with health impelling ideas.

No Two Minds act on exactly similar lines, and it is, therefore, impossible with our present knowledge to lay down any definite rule for procedure that can be followed in every individual case. The food of the mind is the subjective ideas, and the objective sensations reaching it, and the first principle must be to see that through consciousness the mind of the patient receives helpful, healthful food. The elements which constitute this food are popularly known as suggestions, and we cannot escape the fact that we are constantly giving effective suggestions to our patients.

We must, therefore, study to make these suggestions helpful and healthful.

If we have the willingness, we can soon learn to add to the indirect and often unintended suggestions which we are of necessity constantly making direct, forceful, constructive suggestions which will be of material and immediate benefit. Indeed we shall find that the majority of our patients will meet us more than half way in this, and either by their own volition or through our suggestive help, assume that attitude of relaxed expectant attention in which the latent powers of the mind can best be aroused and regulated. The use of these, as well as a knowledge of the human body in health and disease, is necessary, but I

urge you not to stop with them. The human body is a machine impelled and directed by a mind, and we must strive not only to understand the mechanism of the body, but also to comprehend the working of the mind, if we desire to do the best possible. That is, the greater our knowledge of psychology, the greater our success in our work and the greater the service we are able to render to our confiding patients." - in "The Therapeutic Importance of the Mental Attitude of the Patient", Journal of the Colorado State Medical Society, March 1915.

Instruction for the Physical and Spiritual Sustenance of the Body; Concerning The Correct Mental Attitude for Healing

To be Bound; by any Set definite period of activity, whether mental or physical, is one, among many, of the conditions that can cause the Rebellious Forces to arise within the body: Mentally and necessarily Physically.

With the arising of Rebellious Forces, or some physical pains that may be minor in themselves; and necessary to be met by the filling of self With the hopes, and the desire to overcome (and these being so overcome by the desires that have been allowed to be builded), the body cannot assume an Attitude of:

"I will eat this because it pleases me."

Then the individual becomes in a manner the slave to self's own Indulgences, in:

1. **Mental Things**
2. **Physical Things**
3. **Material Things**

To overcome Health Conditions, it requires that there be made by self a definite stand to be taken; that is:

"If there is given me a definite program to follow I will; I Will; I Will adhere to it, no matter What I may suffer mentally or physically! I will Trust in the Divine forces innate, and now submerged often; within my inner self for the Strength to Endure, for the ability to say No when I should! I know a Diet is necessary in my physical condition.

I will adhere to that I Know is not harmful.

I Will adhere to the use of only that which is beneficial now and hereafter for my welfare.

I will take such medicinal properties only that Will Add To My Physical Well-Being! I will take such mental and physical exercises that add to those things administered in the Chiropractic Adjustments, and in the medicinal properties for my well-being. I will so conduct my own reading, my own studying, my own associations, in such a manner as to be beneficial to my physical and mental well-being. I will Think; I will act; I will consider Others needs Before My Very Own; even in my ministering to that within myself that requires adjustment mentally and physically!" Where, then, may this be accomplished?

First that determination must be found in self's Own mind, heart and soul; for, as the body knows, it is not All of death to die, neither is it all of life Just to live! but to be of a service to someone else is the Only way that life is made to be such as to bring contentment, and to find the joy, the pleasure in living."

With such a definite stand taken, there may be then, and only then, followed the Program of Treatments, given by the Emunctologist.

Concerning The Correct Mental Attitude of The Seeker

Along side with the Applications of Therapeutic Measures; must be made with The Mental Attitude of the Seeker, in relation to self and to others.

Not as of centralizing thought in one direction, so that when there come mental distortions through physical reactions; that there is the activity of the mental in the same distortion or manner, but rather that the filling of the mental body with thought and activity that brings the greater distribution of activities; To the mental body.

The little things said by others, that seem to be naught to them, stabs, hurts, and produces for the body that of retort that brings; Detrimental reactions, and the body hates self, and dislikes the surrounding effect of conditions.

Thus, in the application, of mental self; would be in the manner to so fill self's time, self's mental forces, with that as may be accomplished; in the word, in the deed; that the body will; Continue in finding self satisfied in; Doing for others; and he that aideth, he that helpeth one, is Lending to the Lord.

Keep; That ever before self, and there will come a peace that has not been felt.

Put self rather, then, in the hands, in the mind, of the; Divine from within, and not attempting, not Trying to be good, to be kind, to be thoughtful; but just Be, and Consecrate self to the service of others.

This peace, this quietness that will come within self from such, will find a ready answer in the mind, in the heart, in the life, in the expression of those; every one; whom the body contacts. This is Living consecration, and not attempting to be moral for moral's sake; not attempting to be good that good may come; but be good that there may be that peace; that understanding, that only comes from putting self in the hands of the divine. Study, then, portions; Any portion; of the words of Him that gave that:

> *"That ye ask in my name, Believing, that shall ye have within yourself." - Mark 11:24*

Do not, then, in asking, make conditions, but surrender self unconditionally into the hands of the divine from within, and that from within shall answer; even as was said:

> *"My spirit beareth witness with your spirit that ye are called the sons, the daughters, of the Living God" - Romans 8:16*

For in Him only is that peace, and the blessings of those whom the body Contacts will bring the greater joy, the greater happiness. Happiness, then, is not a thing set apart from self, but the conditions with which one approaches that in hand to be Done! for when one considers that the position of self is hard to bear, is not as is desired, the desire of the heart often maketh one Afraid; unless that desire is ever in that attitude of:

"Use Me, O God, as I am", for the I AM is ready, willing, to make My will One with Thy Will:

> *"Though He slay me, though He bruise me in mine own selfish or unseen ways; yet will I trust Him day by day" - Job 13:15*

Trust In Him

And He will Not forsake thee; neither will He allow thee to be afraid; for He will raise thee up, and He understands all the hardships, the Little things, the separations, the variations in the surroundings; but Trust Him!

Put the Trust in Him, and in same Know there comes to the body that strength that is not withheld when the Trust is put in Him.

In this manner may the body, the mental body, the physical body, allow the Spirit of Truth, peace, joy, understanding, come in and make for self, for those dependent upon self, mentally and physically, whole and strong; and able and capable of meeting every issue of Everyday.

Hand Healing Therapy

Hand Therapy is useful, in many conditions, such as from incoordination between the Central Nervous System, and the Sympathetic.

For in the body system, there must be those coordinations with low electrical forces, as creations in the body-forces themselves.

The Emunctologist should know that: Hand Therapy; Must be done in love, in harmony, in the desire for the help, for the proper reactions in the body itself.

Hand Therapy Treatments, should be done after Osteopathic Treatments.

Vibration from Hand Therapy Must be done, by an individual who carries Healing in his Body, and Mind. Hand Therapy Treatments, should last for at least 20 minutes, these Treatments should be preformed, every other day, by placing the hands on the patient right next to the skin, in direct contact with the body.

The Wonders of Water: What Makes It All Possible

"Water is a very special substance. It covers two-thirds of the surface of planet Earth. It also constitutes 75% of the molecules making up the human body.

There is much known about the basic physical properties of water, but very little was known, until recently, about the **Subtle-Energy Properties of Water.**

Much of the Preliminary Evidence for these special properties comes from Studies on the Effects of Laying on of Hands Healing, conducted in the 1960s.

Of all the Healing Research carried out during that period, the most significant groundbreaking work; was done at McGill University in Montreal by Dr Bernard Grad, MD, Biologist, and Cancer Researcher who pioneered laboratory studies of Laying On of Hands, or Spiritual Healing. Dr Grad was interested, if Psychic Healers had real Energetic Effects Upon Patients. He wished to separate the physiologic effects of emotion (placebo effect), from true **Subtle Energetic Effects on Living Systems.** To study this phenomenon, he created a series of experiments which substituted plant, and animal subjects for human patients in order to eliminate the known effects of belief. Of greatest relevance here is Grad's work with Barley Seeds. To create a "sick plant patient", Grad soaked Barley Seeds, in salty water (which is a known growth retardant). Rather than work directly with the Seeds, Grad had a **Healer do a Laying On of Hands Treatment**, on a sealed container of salt water which was to be used for germinating die seeds.

The Barley Seeds were placed by lab assistants in salt water taken from untreated or healer-treated water containers arbitrarily labelled "One" or "Two".

Only Grad knew the correct identity of the salt-water bottles. The seeds were separated into 2 groups, differing only in the salt water with which each group was initially treated. Following Saline Treatment, the seeds were placed in an incubator and studied for signs of germination and growth. Percent germination of seedlings was calculated and statistically compared between the 2 groups.

It was found that seeds exposed to Healer-Treated Water Sprouted More Often than those in the regular saline group.

Following germination, the seedlings were then potted and placed in similar conditions of growth. At the end of several weeks, the plants were statistically compared for height, leaf size, weight, and chlorophyll content.

It was discovered that Plants Watered with the Healer-Treated Water were of greater height and chlorophyll content.

The experiment was repeated a number of times in the same laboratory with similar positive results. Following publication of Grad's work, other labs in the United States had success in reproducing his results utilizing different healers.

Because of his success, Grad utilized the same experimental protocol to test other subtle energetic effects upon seedling growth rate.

Of particular interest was Grad's success in stimulating the growth rate of plants utilizing water treated with common magnets!

Recent studies by Dr John Zimmerman, utilizing ultrasensitive SQUIDs (Superconducting Quantum Interference Devices) as magnetic measuring tools, have detected weak, but **significant increases in the magnetic field emanations of healers hands during the healing process.**

[New Technologies Detect Effects of Healing Hands, Brain/Mind Bulletin, 30 September 1985]

Although the signals emitted by healers hands during healing were several hundred times that of background noise, these levels of magnetism were still significantly weaker than those produced by the magnets which Grad was using in his experiments. **This finding will have great significance when we later discuss the nature of healing energy.** Another unusual variation thought up by Grad consisted of giving water to psychiatric patients to hold.

This same water was then used to treat barley seeds.

Interestingly enough, water energized by patients who were severely depressed had the reverse effect of healer-treated water in that it suppressed the growth rate of seedlings! Because of the positive growth effects attributed to the healer-treated water, Grad carried out chemical analysis on this water to see if energizing had caused any measureable physical changes. There were Significant Changes in Infrared spectroscopy analyses of Healer-Treated Water.

This test revealed that the Atomic Bond Angle of the Water had shifted slightly from normal. Minor shifts in the molecular structure of healer-treated water also produced decreased hydrogen bonding between water molecules.

Testing confirmed **a significant decrease in the surface tension of Healer-Treated Water, a result of the altered hydrogen-bonding between the energized water molecules.**

Curiously, Magnet-Treated Water Showed Similar Decreases in surface tension as well as positive effects in stimulating plant growth.

[Robert Miller in "Methods of detecting and measuring healing energies", Future Science, 1977] Studies by Douglas Dean and Edward Brame ("Physical Changes in Water by Laying-On of Hands," Proc. 2nd Internat. Conf. Psychotronic Res., 1975), and more recently, Stephan Schwartz, with Edward Brame and others, ("Infrared Spectra Alteration in Water Proximate to the Palms of Therapeutic Practitioners", Research in Parapsychology, 1986), have replicated Grad's findings of alterations in infrared spectroscopy and bond-angle changes in healer-treated water. **This material has been presented not so much for its relevance to Psychic Healing, but because of the significance of these findings in illustrating the Subtle Energetic Properties of Water.** This is a critical point which has been missed by most researchers familiar with these experiments on Healing.

It would appear that **Water can be "charged" with and then "store" various types of Subtle Energies. Subtle Energy of both a beneficial and detrimental nature, can be stored, as evidenced by Grad's studies utilizing Healers, and Depressed Patients. Treated Water was able to induce measure-able changes in: Plant Physiology and Growth**, although there were no physical substances added to nor detected in the water.

During the process of energizing, the healers had no physical contact with the water within the sealed flasks.

Their hands were separated from the water by the glass walls of the containers.

These experiments on the subtle energetic properties of water have relevance in examining the known Principles of Homeopathy." - Dr Richard Gerber, MD, in "Vibrational Medicine", 2001.

The Attributes of the Psychic Forces Manifest in a Physical World

The soul created perfect in the beginning, with that passing through the earth plane wherein it may obtain its body to present before the Creator.

The Psychic Forces is the action; not the spirit, not that produced, but the action of same in physical plane, and as we see in this, and there may be summed up in all of psychic phenomena that of the expression in action of spirit forces through, whether of the 1, 2, 3 or 4 forces or fold of the body, and the development, and the lack of seeing the expression of psychic forces because the individual allows the physical, or conscious mind, to so crowd out the forces as is manifested in the world as to become unconscious, unthoughted, of the existent condition.

Healing by Laying On of Hands

"The Laying On of Hands, was always an important part.

In the British Museum there is a bas-relief taken from a tomb in Thebes, showing the subject sitting down while, at a short distance from him, a man is standing with hand uplifted, evidently about to make a "pass" over his patient.

Isis, on the Zodiac on her temple at Benderah, is represented as making the same "passes." According to the Ebers Papyrus, medical treatment prior to 1552 B.C. included LH on the head of the patient.

In Greece, the value of Laying On of Hands treatment was known for a long time. Aristophanes saw it being done in Athens about 4 centuries before the birth of Jesus. It played a part in the cures of the Asklepian temples where a blind man's sight and a barren woman's fertility were restored by the healing hand of the god Asklepios. This experience was attested to in the testimonials left at the temples and by allusions in the literature. Many of the healings of Jesus reported in the New Testament were done by Laying On of Hands, which was subsequendy carried on by the Christian Church.

The Effect of Laying On of Hands on the Growth of Plants

As early as 15 years ago, a series of experiments was begun to see whether animals and plants could respond in biologically recognizable ways to the Laying On of Hands by a man (O.E.), who claimed considerable success with this ancient method of healing.

Barley Seeds implanted in soil in peat pots were used for these studies.

As in the case of the goiter studies in mice, for Laying On of Hands treatment to be effective the organism did not have to be treated directly.

In the case of plants, Laying On of Hands treatment of the solutions used for the first watering was all that was necessary for significant acceleration of growth. Subsequent waterings did not have to be treated by Laying On of Hands. The plant experiments went through several stages of development.

In the 1st series of experiments, the solution was placed in an open beaker and held between OE's hands for 15 minutes.

In the 2nd series, the solution was treated while in reagent bottles closed with ground glass stoppers, and in the third series, sterile solutions were treated in sealed bottles.

In all 3 types of experiments, plants treated with water that had been magnetized by Laying On of Hands grew significantly faster and/or more abundantly.

In the study involving treatment of solutions in sealed bottles:

The Emotional State of a Person At The Time of the Treatment of the solutions, was shown To Be Of Crucial Importance In Determining what effect such solutions would have on the growth of barley seeds.

The study involved 4 groups of plants:

1 group watered by a solution treated by a person who had a “Green Thumb”, 2 groups treated by solutions held by persons who had been psychiatrically diagnosed as suffering from a Depression, and a 4th group watered by a solution that had not been treated by anyone; it served as the control group.

The outcome revealed that the plants watered by the solution treated by the person with the “Green Thumb” grew better than those watered with the 3 other solutions. Of some interest was the finding that the plants watered by the solution of one of the depressed persons grew the slowest of all.

State of Healer

Mesmer claimed the results obtained by his method were due to the passage of an energy from the healer (magnetiser) to the patient. In the human situation, the transfer of energy to the patient in mesmerism therefore appears to be a function of the mesmerist's physical and emotional state and not directly of his will or any mental exertion.

> ***"I laid my hands. Then I asked God, to help me and direct his healing energy to the patient. I also prayed that God's light and love, would enlighten my patient's spirit, so that his soul would be better able to receive divine healing rays. The healer serves as a conduit for this healing energy."*** *- Rosemary Altea, Healer*

Healing by Laying On of Hands

The Laying On of Hands is a biblical expression and is an essential part of what later came to be called Mesmerism. As it turned out, these studies were also a critical test of Mesmer's fluid or Energy Theory.

Later proponents of a vital energy, such as Karl von Reichenbach and Wilhelm Reich, who, more than anyone else, extended our knowledge of life energy, experienced the same rejection as did Mesmer.

However, Mesmer was allowed to die at home in his 80's, but Reich died in prison at the age of 60. Never again in the 175 years between Mesmer and Reich was the idea of a Vital Energy taken as seriously by so many men of intellect as was the case in Mesmer's time, and never since that time has it come so close to entering the body of science. Success in Healing by Laying On of Hands would appear to depend on a certain way of bodily functioning, involving a certain awareness by the healer of his own bodily energy, and the energy around him coupled with a certain way of utilizing that energy.

Much of the Healing done by Jesus, was by Laying On of Hands.

Therapeutic Effects by Laying On of Hands

For example, in those who are able to produce some Therapeutic effects by Laying On of Hands, it is likely that the therapeutic situation itself is such as to provoke the streaming of a greater than normal amount of energy down the hands of the healer and thence to the patient, where it can do its work of healing.

A critical part of the psychological attitude of the healer is that he be in such a frame of mind that he can receive the energy from a still more powerful energy source. That is, the chain of energy flow is from God to healer to patient, and for the chain to be complete the patient must be open to the healer while the latter must be open to the higher energy source.

The emotional state of the healer may be decisive in determining whether the outcome for the patient is favorable or unfavorable. Not only are psychological and physical factors involved, but as with any talent, sociological factors may in

fact determine whether or not such an ability will surface to consciousness.

The plant experiments previously reported, involving a person with a “green thumb”, and 2 depressed patients, revealed that there is a correlation between the qualitative effect produced by the energy transferred by Laying On of Hands and the emotional state of the person “magnetizing” the water.” - “Dimensions in Some Biological Effects of the Laying on of Hands and Their Implications”, Dimension in Wholistic Healing: New Frontiers in the Treatment of the Whole Person, 1979.

“Dr Bernard Grad, Canadian biologist, considered one of the foremost Researchers of Laying on of Hands Energy Healing.

His influence and legacy remain today, historic and groundbreaking.

While studying at the university, **he also began studying with Dr Wilhelm Reich. His work and thinking were profoundly changed through his contact with Reich’s work. He was captivated with Reich’s ideas related to Orgone and the concept of Life Energy.** and considered him to be a mentor.

The time with Reich significantly impacted him. It was, also, near the time of Reich’s death, that he met the Hungarian healer, Estebany.

It was thru this meeting, that Dr Bernard Grad, came to experience personally the felt sense of Energy Healing. These experiences altered the direction and course of his research. He began researching Healing, and its effects.

He researched wound healing in mice, comparing the healing rates of mice held by an identified healer, to those of mice not held by a Healer. His research showed an increase in the rate of wound healing times with the mice that were held by the healer’s hands. He looked at the growth rate of seeds and plants which had been watered with water held and treated with energy by different people (including the healer Estebany, a lab technician and a depressed patient) and compared it with the growth rate of seeds and plants where untreated water was used.

He found a significant increase in the growth rate of seeds and plants exposed to the “treated water.”

He found that when Healing Energy was involved, there was an identifiable difference in positive outcome greater than the control in which no healing energy was used.

This research and others were done through 1957 on into the later 1900’s.

Dr Grad’s research laid groundwork and opened doors for future research in the field of Subtle Energy, and Energy Medicine.” - in “Subtle Energies & Energy Medicine”, 2010.

> ***"Always begin your Treatment by Allaying the Fear of patients. Silently Reassure them as to their Exemption From Disease and Danger. Watch the result of this Simple Rule of Christian Science, and you will find that it Alleviates the Symptoms of Every Disease."*** *- Mary Baker Eddy, in "Christian Science Practice", Science and Health with Key to the Scriptures, 1875.*

Therapeutic Touch

"The variables that can affect the health and well-being of living systems are multitudinous. An alternative avenue for research is suggested in work done by Grad using **Near-Infrared Spectrophotometry of Treated Water Samples** (JASPR, 1965).

Dean and Brame continued that line of research, and their results supported Grad's findings (Proceedings of the Second International Congress of Psychotronics, 1975).

Those who Trained in some kind of Therapeutic Technique and characteristically involved themselves in such activities Produced More Significant Results than those who had not undergone such training, or who did not characteristically involve themselves in such activities.

This study supports earlier research suggesting the existence in Water of an objectively measurable infrared signature which is independent of measurements on living systems. The central difficulty in interpreting these results lies in the session controls, some of which also had altered spectra. The cause of this is undetermined. Environmental influences do not provide a compelling explanation for either the overall effect or for the changes in the session controls." - in "Research in Parapsychology", 1986.

9 - To Apply Correctly All the Knowledge Received at the School of Health in Emunctology

The Emunctologist should apply all the knowledge received at the School of Health in Emunctology.

For Any Cancer Treatment to be Successful, It Must Fulfil 2 Fundamental Components:

> ***"1. The first component is the Detoxication of the Whole Body, which has to be carried out until all the Tumours are absorbed, and the essential organs of the body, are so far restored that they can take over this important "cleaning function" by themselves.***
>
> ***2. Secondly, The Entire Intestinal Tract has to be restored simultaneously; with the restoration of the Intestinal Tract, the most important secretory functions will be repaired, as well as its circulation and motility regulated by the Visceral Nervous System.***
>
> ***Immunity means that no abnormal cell can grow or develop in the body with normal metabolism. For that purpose, the degree of restoration of the Liver plays a decisive role."*** *- Dr Max Gerson, MD, in "A Cancer Therapy", 1958.*

With the Blood and Liver cleansed, circulation is improved, enhancing the pathways for transmitting hormonal messages and communication between the various organs of the immune system.

The Book "Emunctology, Principles and Foundations of the Emunctory System", 2021, along with this present volume "Emunctology Reference Manual", 2025, serve to:

> ***"Determine by Clinical Facts the Value of Permanent Emunctories in Chronic Diseases."*** *- in "Subject Prize of the Academy", Academy of Medicine, Paris, 1857.*

Clearly Demonstrating that:

> ***"Disordered Action, in what we call Disease."*** *- Sir William Richard Gowers, in "The Dynamics of Life", 1894.*

The John Braund Method of Cancer Treatment

"In 1948 the New South Wales government instituted an inquiry into the claims of John Braund, that his secret treatment had cured 317 cancer sufferers.

When he was 23, he had been given up by doctors as a hopeless cripple but that he discovered "key" truths about the blood circulatory system and had cured himself. He said that he was now applying the same insights to cancer.

Braund believed Cancer was caused by a problem with bodily Circulation (a

blockage in the blood stream), and hence was amenable to Massage, Hydrotherapy, and Blood Detoxification.

Braund believed that it was critical for Blood to be moved away from a person's heart and in order to achieve this would Massage his patient's legs and feet, and use warm water Foot Baths. The more spectacular part of his treatment that news coverage dwelt on involved Braund injecting the patient with his secret formula. Sometimes he would inject the tumour itself or make a series of injections around the tumour, and sometimes, with internal cancers, he would inject a close or, in Braund's opinion, related part of the body, such as in one case of uterine cancer where Braund injected the woman's lower back.

The solution was milky in appearance, and had a distinctive smell, which one observer reckoned was ammonia. When Braund injected the tumour or around the tumour, the flesh would die and, after 10 to 20 days, would slough off, leaving a "purulent ulcer" at the injection site which Braund would bandage and leave to heal. In the other instance, Dr Ulric Williams, MD, in New Zealand was offering patients the Koch–Baker cure – a cancer-killing injections popular in the United States in the 1920's and 1930's." - in "John Braund, and Regulating Cancer Treatment in New South Wales, Australia", Med. Hist., April 2013.

Braund Method of Cancer Treatment

"In Beverly Hills near Sydney, Australia, **John Braund, Treats upwards of 30 people a day. John Braund, 78 years of age, with No Medical Training, yet he is able to produce Many Patients Who Claim Emphatically that they Have Been Cured of Cancer.**

Mr Braund claims that:

"The Primary Cause of Cancer is a Blockage in the Bloodstream."

1. First Stage: Consists in Detoxicating the Blood, as far as possible, and ensuring adequate Blood Circulation, especially in the minute capillaries. The Braund Method insists that the blood be swept away from the heart, and not to it.

2. Second Stage: Is the injection into the tumour or growth of a liquid (smell of ammonia, thought to be Alum), after a lapse of 10 to 20 days the tumour now dead and shrunk to a quarter its normal size.

> *"I have been treating malignant growth for 20 years, I took 1 case before the Cancer Research Board in 1933, and Professor MeCallum who was chairman of the board said:*
>
> ***"You are treating these just like glorified boils, that's all they are."***
>
> ***He asked me then how many more I had or was doing; I said 6 but I had 8, they promised to come next morning, and I've not seen them yet, and that was 14 years ago. I've challenged them here a few weeks ago, to provide a certain number of patients certified by them as cancerous growths; but they'd have to be approved by me to say that they would have cancer, and if I said they had cancer I'd be satisfied. And I would take them and cure them, providing that they didn't look at the patients during the time from the time that I started till the time that I finished.*** *Then I'd hand them over I have cured many people, but particularly 318. Those were all malignant growth I would like cameraman to interview some of those that I have done, and they can see for themselves whether it has been a malignant growth or not." - John Braund*

The first patient is Mrs Jackson, who had a very large breast tumour removed a week ago. The wound is healing rapidly, and her general condition is good.

> *"I am one of Mr Braund patients, and* ***I feel since Mr Braund has removed the grace that I had, I have a new lease of life. I had [Medical Trade] Ray Treatments for the grace, and which I made no progress at all.*** *After I'd finished my treatments, I was feeling so ill in and so sickly and run down but I really think that by now I just wouldn't be here at all.* ***I'd like to say here and now that Mr Braund is a very remarkable man, he removed my grace in a manner that's really amazing without anaesthetic, without bleeding without knife and without pain which I consider no [Medical Trade] Doctor could possibly do."***

Now, a man who had a Cancer removed from his face by a surgeon some years ago, but another grew.

> *"My name is Austin Reddicks, I am the justice of the peace.* ***For the last 3 years, I have been under specialist treatment for cancer. In October 1946, I had glands removed, I was advised to see Mr Braund, and he assured me, that he could cure me of cancer, without the use of the knife. And I am very pleased to say that he has done so, and is to be hoped the world will benefit by his remarkable discovery."***

> *"My name is Bert Higgins,* ***some years ago I was informed I was suffering with cancer. I felt quite confident myself that that was correct owing to the knowing pains, that I***

> ***suffered in my stomach, pains in the side and on my spine. I was fortunate enough to meet Mr Braund who diagnosed my case as cancer he took the growth from my back. That's just 4 years ago and since then I've had no recurrence of the trouble whatsoever."***

> *"My name is Arthur George Davis,* ***about 15 years ago I had a very bad endless diagnosis, very bad cancer, and the local doctor sent me down to a specialist in Sydney, and he treated me with Radium. It appeared to be cured then but it came back again, and then it got very bad and I went to the local doctor again, and he sent me down to another specialist, and the specialist said for Diathermy Treatment. But the man said it was far gone, he couldn't treat me with that and he sent me to a surgeon. And a surgeon said that I'd have to have me face practically I've cut off. I was advised to go to Mr Braund and from the very start he said it was a very bad cancer, but he said he could cure it and he guaranteed he took weight off my mind. That's roughly about that is 2.5 years ago, and I've been no reoccurrence of the complaint since."***

Mr Gifford had cancer of the liver, Mr Braund states his treatment has brought the growth to the surface, and he is extracting it without anaesthetic or pain to Mr Gifford, who 3 weeks ago could not bear the slightest touch to his stomach.

Minutes after the operation Mr Gifford walked briskly from the surgery, apparently no more affected than if he'd lost a loose tooth.

> *"Some time ago about the 17 November 1947, I had a stomach trouble diagnosed by a leading Melbourne surgeon as cancer of the liver, it was a recurrence I'd had. A cancer removed from the lower bowel, 4 years ago. Three minutes ago I had the cancer removed by Mr Braund, here it is in this bottle during the time Mr Braund was treating me, I was not confined to bed, I was able to get about quite well, and I think I put on a little weight, that is before the cancer was removed. I feel fairly well today, quite well, able to go about, and I think well. Mr Braund tells me I'll be quite all right in 3 weeks time." - Mr Gifford*

BRITISH
PATHÉ

Can John Braund Cure Cancer? (1948)

Here is the opinion of a Cancer Authority with a world reputation:

"I've been watching Mr Braund work for nearly 4 years, and I know too much about cancer I have any doubts about his being able to cure at least some forms.

He seems to have some cure for malignancy I'm sure that when the time arrives that he will make his formula known for the benefit of humanity and earn the gratitude of cancer sufferers throughout the world. He is anxious to secure recognition for his work, and is not concerned with any other purpose whatsoever. It is not impossible that a layman should discover a cure for a scourge which has baffled the world's greatest scientists it is well to remember that some of the world's greatest discoveries have been simple things made by simple men." - Dr Henry L Brose, Doctor of Science, formerly Professor of Physics at the University of Nottingham, England, Elected Member of the Imperial Cancer Research Committee, and cancer Lecturer at Sydney University from 1935 to 1938." - in "Can John Braund Cure Cancer?", British Pathé, 1948.

Braund Method & Technique

"The Braund Treatment consists of Massage and Hydrotherapy, with the view of restoring the circulation; and when the patient's condition is judged to be satisfactory a local injection of some substance is made into a selected portion of the patient's body.

The Essential Treatment, which forms the basis of Mr Braund claim, is the injection. The Committee was not given an opportunity, as promised, to see Mr Braund actually inject his secret cure into a patient, nor did he divulge to them what he injected. It is a secret remedy.

The medical members of the Committee, however, have seen the results of such injections and can readily visualize the technique.

The injection treatment consists of injecting an escharotic fluid into the subcutaneous tissues. The ulcers resulting from this injection are shallow and indicate that the fluid has a localized necrosing action.

All such escharotic fluids coagulate the albumin of the body tissues and fluids, occlude the blood vessels and are not absorbed into the general circulation.

It must be noted here that Mr Braund does not inject the fluid directly into the blood stream. There can be no question, therefore, of such fluid having any remote action on parts of the body other than the site of injection.

The site of injection may be some considerable distance from the actual cancer. For example, the patient is injected over the sacrum (termed by Mr Braund the "genital vertebra") or perhaps the lumbo-sacral junction for cancer of the womb or lower bowel, over the lower dorsal vertebre for cancer of the stomach, or in the abdominal wall for cancer of the liver.

Within 2 or 3 weeks from the time of injection a slough of necrotic tissue is removed from the site of injection, leaving a purulent ulcer varying in size up to 6 centimetres in diameter, and about 1.5 cm to 2 cm in depth.

Further injections may be made from time to time.

The ulcer gradually heals during several weeks with the formation of scar tissue. There are numerous substances which, if injected into the body, will produce necrosis with separation of a slough similar to that produced by Mr Braund's technique. **Mr Braund's Treatment is not unique, since he has had numerous precursors in his special field.**

In 1932 the "Roberts Cancer Cure" was launched with great Press publicity in Queensland, and a public company was formed with considerable capital to exploit what was claimed to be an absolutely certain cure for cancer.

The essential part of the Roberts cure was an injection which produced necrosis in a similar manner to Mr Braund's method, though, no doubt, the escharotic employed may have been different. About 1936 the "Koch-Baker Treatment" was introduced into Australia from U.S.A.. There is perhaps no need to say more than that there is a striking similarity between these Treatments and that employed by Mr Braund. The technique is similar, the resulting necrosis is similar, the theory on which they are based is similar, and, unfortunately, the outcome for the patient is likewise similar." - in "The Medical Journal of Australia", 29 May 1948.

What Happens When Someone Starts Questioning The Medical Trade Cancer Protocol

"Dr Kat Lindley, MD: How did your colleagues react, when you decided to Question the Standard Cancer Protocol?

- Dr Jamie K. Waselenko, MD: **I will tell you that I had drank the Kool-Aid, and was Indoctrinated in Pharmaceuticals just like everyone else.**

I used to tell patients very stupid things like; Diet Doesn't Matter, and I'm surprised to even hear people come back from well-known universities, and still have that same mantra spoken. But I didn't wake up till Covid-19 "Pandemic." When Covid-19 occurred, I had a lot of cognitive dissonance, I saw a lot of really smart people saying very unwise things.

The other part of this, and I really do believe this was a God thing, he ripped the eyelids off my head during that time frame. I actually started looking at animal data, and the Vaccine Data from the RSV Vaccine in the 1960's, things that I would have never normally done as an Oncologist.

And so, it was during that time frame that I realized that everyone, or everything (both: humans & animals), that had been Vaccinated Did Worse.

So, I was really not on board with that. And so, that's when things at my own institution kind of, became very strained. My partners couldn't see it.

I tried to explain to them concerns. Unfortunately, the Chief of Medicine, could not understand that. And so, I made the decision that; I Wouldn't Take the Covid-19 Vaccine, nor could I endorse it for my patients without long-term safety data. So people that I knew and trusted and respected did not agree with me. So, I ended up leaving my institution in 2021. I recognized, I'd only ever been trained to be a Big Pharma Salesman, because there were simple things in

Oncology, that I should have always known, like: how Glycolytic Cancers are, and how Diet Matters." - Dr Jamie K. Waselenko, MD, FACP, FICT, in **"Rethinking Cancer: Root Cause Over Routine Care", Independent Medical Alliance; non-profit working to Expose Corruption in Medicine**, 29 October 2025.

> ***"Many studies have found that glycolysis promotes tumor growth, metastasis, and chemoresistance, as well as inhibiting the apoptosis of tumor cells."*** *- in "The significance of glycolysis in tumor progression and its relationship with the tumor microenvironment", Front. Pharmacol., 14 December 2022.*

Glycolytic Cancers are tumors that exhibit a high reliance on glycolysis, a metabolic process that converts glucose to lactate, even when oxygen is present.

This phenomenon, known as the Warburg Effect, allows cancer cells to grow rapidly by providing Adenosine Triphosphate (a nucleoside triphosphate that provides energy to drive, and support many processes in living cells) quickly, supplying building blocks for biomass synthesis, and creating an acidic tumor microenvironment. **This metabolic shift supports cancer aggressiveness, invasion, metastasis, and helps cancer cells evade the immune system.**

Chaga Extracts Anti-Proliferative Properties in Melanoma Skin Cancer

"Inonotus Obliquus (Chaga) a fungal parasite of birch trees, **used for centuries due to its curative powers against Cancer, and Infectious Diseases.** Over the past decade, Several Studies have examined **the Anti-Tumor Properties of various Chaga extracts, and demonstrated remarkable efficacy of this natural product in the Treatment of Solid Tumors** in mice. We sought to determine if ethanol extracts from Chaga affected the oncogenic properties of cultured melanoma cells. **Chaga Treatment Led To Melanoma Cell Toxicity in a dose dependent manner. The data suggest that ethanol extracts of Chaga: Induce Cell Cycle Progression, Alterations, and Cell Death in Melanoma Cells. Similar results have been reported for other cancer cell types; where Chaga Induces Apoptosis (death of cancer cells), as well as a Reduction in the expression/activity of key cell cycle regulators. These data indicate ethanol extracts of Chaga; are effective in altering the oncogenic (tendency to cause tumours) properties, of mouse melanoma tumor cells."** - in "Ethanol extracts from the mushroom Inonotus obliquus (Chaga) alter melanoma cell viability and morphology", BIOS, 2013.

> ***"She harvests birch bark for oils and crémes (betulinic acid, she says, is useful for Skin Cancer), as well as chaga mushrooms, which grow on the upper branches of birch trees and are very valuable. "Chaga is used for Gastrointestinal Cancers, to both prevent and support the person going through therapy. Chaga is also used for Melanoma; it is being shown to have antioxidant values, even more than acai berry." She says." - in "Women Healers of the World: the Traditions, history, and geography of Herbal Medicine", 2014.***

"In the early 1990's, Ulrich Abel a German Biostatistician published a paper that rocked the world of oncology.

Abel wanted to understand what progress had been made in the 20 years since President Nixon declared "War on Cancer" in 1971, with the signing of the National Cancer Act, the allocation of $1.6 Billion in research funding over the next 3 years, and the Promise of a Cure within 5 years, 20 years later, the United States and its Global Partners had poured many Billions of Dollars more into Cancer Research.

Dr Abel wanted to understand the return on this unprecedented investment.

He reviewed thousands of oncology papers published in the previous 2 decades, and requested analysis and comments from hundreds of oncologists in order to understand the impact, specifically, of chemotherapy in the treatment of Advanced Epithelial Cancer (Epithelial cancer is a type of cancer that begins in epithelial cells, which line the surfaces of the body, inside and out, including organs and skin. The most common type is carcinoma, which makes up 80% to 90% of all cancer cases and includes cancers of the lungs, breasts, prostate, and colon). In other words, how effective is our number one weapon 20 years into the War on Cancer?

Dr Abel's major finding, was that other than lung cancer, and small-cell lung cancer in particular, **there is no direct evidence that chemotherapy prolongs survival in patients with advanced carcinoma.**

Even with lung cancer, the benefit of chemotherapy is:

> ***"At best rather small, and success of most chemotherapies is appalling. There is no scientific evidence for its ability to extend in any appreciable way the lives of patients suffering from the most common organic cancer. Chemotherapy for malignancies too advanced for surgery, which accounts for 80% of all cancers, is a Scientific Wasteland."*** *- Ulrich R. Abel, in "Cytostatic Chemotherapy of Advanced Epithelial Tumors: A Critical Inventory", 1995.*

I first heard about the use of chaga for cancer, in Aleksandr Solzhenitsyn "Cancer Ward", 1966. The main character developed a deadly cancer (melanoma), he ran away into the forest rather than submitting himself to the horrors of "treatment" in the cancer ward. In the forest, he was given a tea made from a fungus (chaga) growing on birch trees, which cured him of cancer, and eventually led to his escape from the Gulag. That dramatic depiction of chaga's healing powers stuck with me, and resurfaced years later when I read that Rudolf Steiner thought that birch trees have a strong affinity for skin ailments, including skin cancer. Knowing the remarkable similarity of growth habit and appearance of chaga to melanoma, **I consulted the medical literature and found that birch trees synthesize a protein called betulin, which exhibits protective activity against many types of cancer cells, melanoma in particular.**

I was not surprised to find that chaga collects this betulin from the birch sap and concentrates it in its fruiting body, the part used to make chaga tea.

Chaga is a dramatic case in which the synthetic approach to understanding a plant or mushroom as a medicine aligns perfectly with a reductionist approach.

As Goethe taught, We Must Learn To Read The Book of Nature, and in this way the plant or mushroom will demonstrate paths to healing for anyone who has the openness to see. We must see the overall picture, the statement it makes to the world. It is telling us about its place in nature and its relation to the human being.

The Chaga is essentially saying:

> *"I am the way to restore balance and harmony when black growths emerge from your skin and threaten to overwhelm your life. I can help you come back to this harmonious relationship that I myself have found with my friend the birch trees."*

I had a patient in a dangerous situation with melanoma who used chaga as a tea and alcoholic extract, each of which concentrates different chemicals and elements from the fungus. My patient was in her mid 60's when she had a recurrence of a malignant melanoma, that was originally found and excised 3 years earlier. With melanomas, recurrence is often an ominous sign and a development associated with a poor prognosis. Since **there are few conventional medical treatments that work for people with malignant melanoma**, she sought me out for alternative care. Five years later, to the surprise of her conventional oncologists and a melanoma specialist, **She Is Free of Disease, and claims to be In Better Health Now than she was 5 years ago." - Dr Thomas Cowan, MD, in "Cancer and the New Biology of Water"**, 2019.

Inonotus Obliquus (Chaga) is specific for Melanoma.

"In nature we never see anything isolated, but everything in connection with something else which is before it, beside it, under it and over it." - in "Conversations of Goethe with Johann Peter Eckermann", 2014.

"You must, in studying Nature, always consider both each single thing and the whole: nothing is inside and nothing is outside, for what is within is without. Make haste, then, to grasp this holy mystery which is public knowledge. Nature is beneficent. I praise her and all her works. She is silent and wise. She is cunning, but for good ends.
" - Johann Wolfgang von Goethe, in "Selected Poetry"

Unofficial Alliance Between United States Public Health Service & American Medical Association; Accepted as Part of Governmental

"An Unofficial Alliance of the United States Public Health Service and the American Medical Association is accepted as part of a Governmental Plan. Nothing Is Further from Moral and Legal Reality. Is it not in the public interest to constantly improve the scientific standing of the Drugless Professions, or to improve The Lot of Medically Unattached Americans? Should not the numerous other Groups of Physicians, Drugless and Manipulative, enjoy the benefits of the millions in tax funds being spent for scientific improvement? Should the patient of a Drugless Practitioner be denied the advantage that will accrue from the spending of these public moneys for advanced Science in health? The proposal is set up to follow the age-old practice of steering All Public Largesse of a scientific nature to the Ultimate Benefit of members of the Privately Owned Medical Corporation; the American Medical Association. Similarly, **only institutions staffed with members of the American Medical Association, seem destined to enjoy the results of such benefactions. It is noted too that all medical staffers within the suggested control agency; the United States Public Health Service, are members of that same group.** Heart Disease & Cancer have been increasing rapidly over the last 50 years, at all ages. Spokesmen blandly note this will get increasingly worse. This committee is well aware of the inroads from other degenerative causes. Notable exceptions in **health enlightenment are to be found in such countries as Switzerland whose Government takes steps to insure a more rounded Dietary in the Basic Food items of its citizens.**

There, **white flour is heavily taxed, while the whole grain, stone ground type is tax free. It has been pointed out in the hearings, by one well-known heart disease authority, that the incidence of cardiac problems is almost zero among natives of south Italy while contemporaries from that region living in the United States experience the disease at the going American rate.**

We plead that more time, and thought be applied to this proposition and that more intensive perusal of the worldwide facts, and figures in Basic Health and Nutrition be brought to bear by this body. **More mature thought can be applied to the possible contributions of the Drugless sciences in this universal health scene with benefit to the many interests involved.**

It seems certain that no one in the Congress would willingly deny the rights and interests of the many thousands of non-medical practitioners, and other physicians outside the ordinary pale of medical acceptance.

Public interest demands their well-being and professional standing be considered in these deliberations.

Additionally; there is the case of Dr William F. Koch, MD, considered by many to be somewhat Ahead of His Time in Medical Science. All the resources of the Food and Drug Administration (FDA), were brought to bear against him after his announcement of an effective Cancer Cure (Glyoxilide) in 1918.

Some Millions of Federal Funds were expended on prosecution costs to remove this man from the scene and certain basic rights were denied him, according to the record. **Constant harassment compelled this man to remove to Brazil,** where he is honored in scientific circles today.

The case of Dr Andrew C. Ivy, MD of Chicago has followed a very similar pattern as far as Official Medicine is concerned. Attention should be focused also on the experience of Dr Joseph Wilson, MD of Pittsburgh and his Muchoricin Remedy for Cancer and Other Common Ailments. It appears in this case that such simple ingredients as wheat, yeast, salt, and water cannot be considered fairly and objectively as raw material for scientific advancement toward an acceptable cure.

The Science of Herbalism was practiced and advocated by Hippocrates, and goes all the way back through the history of man. There is a tremendous potential to worldwide prosperity and well being with a more realistic and improved scientific approach to using products of the American Farm and Forest. Improved Farming of an expanding organic variety, Are Making an Increasingly Important contribution to the Health Status." - Harold Edwards, Vice President, National Health Federation, in "Senate Joint Resolution 41, 86th Congress", International Health and Medical Research Act of 1959, 3 March 1959.

Koch Cancer Treatment

> *"Delaware held her own at the 81st Annual Session of the American Medical Association, which was held in Detroit 23-27 June 1930. On 24 June, ye humble editor of this epitome of erudition was elected to the Board of Governors of the American Medical Editors and Authors Association, for a term of 2 years.* ***We are quite certain that all the Delaware doctors who were in Detroit have returned home without contamination by the Great Cancer Curer, Dr William F. Koch, whose name somehow or other did not appear on the official program."*** *- in "Delaware State Medical Journal", July, 1930.*

Dr William F. Koch, MD, worked from a Physiologist's point of view and developed theories on how the chemistry of the natural immune system of the body worked. His early research focused on the Parathyroid Glands. The Parathyroid Glands are 4 small glands, each about the size of a grain of rice, located in the neck behind the Thyroid Gland. Their main function is to produce Parathyroid Hormone, which Regulates Calcium and Phosphorus levels in the blood. This is crucial for bone strength, nerve function, and muscle contractions. The Glands Increase blood Calcium levels by absorbing Calcium from food, pulling it from bones, and converting Vitamin D to its active form, which aids absorption in the intestines. Dr Koch concluded that the tetany that occurs after the Parathyroid Glands are removed was due to the accumulation of toxic substances in the body. These Toxic Substances blocked the normal tissue oxidation process. This was a very important discovery in Dr Koch's research, and helped shape his theories on cancer treatment. Dr Koch became widely known for injecting a substance into a cancer patient's bloodstream, known as the Koch Treatment. The substance originally called "Synthetic Anti-Toxin", and later "Glyoxylide." Dr Koch disclosed the formula as: 1 part Gyoxylide to 1 Trillion parts water.

Dr Koch explained how Gyoxylide worked:

> ***"The serum is carried to the cancer by the blood. The cells are killed. Their osmotic pressure increases and they become waterlogged and swell. The pressure of the swelling causes more pain until the killed part has been disintegrated and absorbed, and the absorption, or burning up, causes fever, usually occurring about 12 hours after the injection of the serum. Cancer tissue so absorbed also serves as nourishment. If the patient has been starved a long time because of cancer of the stomach, a large cancer, paradoxical as it is, is a benefit since, once killed, it supplies food elements and***

> ***actually gives strength to the patient. Cancers previously treated with X-ray or radium, however, if killed by the serum treatment, gives products that are very toxic, sufficiently so, in some instances to kill the patient."*** *- Dr Koch, in Detroit, 1919.*

"The Koch method is a systematic course of Dieting, and Enemas combined with administration of Koch Synthetic Antitoxins: Malnide, Glyoxylide, and Parabenzoquinone. The treatment injections were made up of 1 part glyoxylide to 1 trillion parts water. Dr Koch preferred to deliver glyoxylide only once or twice in the form of intramuscular injections (2 cc), in a highly diluted (possible homeopathic) form. Initially called this substance "Synthetic Anti-Toxin"; it later became known as "Glyoxylide." The Treatment was also marketed under the label of the Christian Medical Research League. **Dr Koch stated that the Koch Synthetic Antitoxins stimulate the destruction of the toxins responsible for the growth of cancer tissue.** Dr William F. Koch, MD, **reasoned that cells become cancerous because the blood's Oxygen levels get depleted. If sufficient Oxygen were continually delivered to the body's tissues, cancer pathology would be virtually impossible. This same Treatment plan was also found useful as a cure; for 69 diseases from Appendicitis to Herpes Zoster. Dr Koch stated that his discovery was Also Effective Against Tuberculosis, Psoriasis, Leprosy, Polio, Syphilis, Appendicitis, Herpes Zoster."** - in "Koch Treatment / Koch Synthetic Antitoxins", British Columbia Cancer Agency, February 2000.

Koch Cancer Treatment Antitoxins Therapy

"The first mention of the Koch Antitoxins was made in an article by Dr William F. Koch, MD, in Detroit Medical Journal, July 1919. The Koch Treatment is said to be based on a belief that cancer is a response to a Toxic Product generated within the body, and that this product must be oxidized before recovery is possible. The Koch Method uses a Cleansing Regimen by Diet, combined with the 3 Koch Antitoxins: Glyoxylide, Malonide and Benzo-Quinone (BQ). The chief therapy for cancer recommended by Dr Koch is Glyoxylide, administered by injection in a solution said to contain 1 part of "partially oxidized inositol" to a trillion parts of distilled water. The other 2 Antitoxins, 1:4 Benzoquinone and Malonide, Ketene Solution, are said to be effective in: Allergies, Infections, Cancer. All 3 Act as catalysts to en courage the destruction of the toxins, which he holds responsible for the growth of cancer tissue. They are administered in combination with a Strict Diet, combined with Colon Irrigation." - in "CA: A Cancer Journal for Clinicians, Jul-Aug 1965.

Existence of Molecule Is Confirmed After More Than a Century

"University of Arizona, Scientists have the first definitive evidence for the existence of a molecule called Ethylenedione (OCCO). This discovery solve a mystery that has troubled generations of chemists for over 100 year, but because the molecule is thought to play a role in an array of chemical reactions related to everything from industrial processes to atmospheric chemistry ("Elusive Molecule Made in the Lab", Nature, 23 July 2015). The OCCO molecule was first suggested in 1913, scientists have been trying to confirm its existence, but with little success. **The most controversial attempt occurred during the 1940's, when Dr William Frederick Koch, MD claimed that he'd not only managed to synthesise the much sought after compound, but that It Was the Active Component of Glyoxylide. Dr Koch, MD claimed his discovery could Cure Cancer and Diabetes, The US Food and Drug Administration (FDA) classified the discovery as "fraudulent." We Can Now Confirm That OCCO Is Real, and its simplistic structure is as beautiful as we could have imagined. You probably even learnt how to write it, if you did chemistry in high school: O=C=C=O.**

The unstable nature of the molecule is what made it so hard to find; it splits into 2 carbon monoxide (CO) fragments after half a nanosecond or so of existence. This type of transient molecule is called a diradical." - in "Existence of Elusive Molecule Confirmed After More Than a Century", Science Alert, 14 July 2015.

Koch Cancer Treatment Plan

"Dr George Crile (Crile Clinic Cleveland), gave thorough information to the profession, and the public on this subject and was in exact agreement.

The report of the 12th Annual Scientific Meeting of the Detroit Institute of Cancer Research, the concensus was the same, Dr Harden B. Jones, Professor of Medical Physics at the University of California, gave the ultimatum:

> *"The odds for or against the recovery from cancer; are set long before the patient sees a physician, and: There is no evidence that treatment by surgery or radiation, the only recognized methods of therapy affect the course of the really malignant forms of cancer. Early treatment is a nice theory, but there is no evidence that it benefits the patient. Some* ***Drastic Cancer Therapies Not Only Do Not Help But Are Harmful.*** *The tumour easily could have a billion cells before it is large enough to be recognized as cancer. Some of these cells are already in the blood stream."*

Unfortunately Radiation does not answer the needs of the patient, But Adds to the Basic Pathology. The Convention of the American Roengten Ray Society, September 1954, added to the Report of the Roengtenologist of the University of Pennsylvania in 1925, when it stated that:

> ***"Irradiation before and after surgery opened the vascular and lymph spaces and helped the spread of the disease instead of retarding it."***

This Report was so unpopular that it was suppressed, 8 to 10 times more radiologists die of Leukemia than general practitioners.

> ***"It is not possible to discuss the irradiation treatment of cancer in a general way for the reason that the disease differs in its type and characteristics of growth in different parts of the body."*** *- Dr Henry K. Pancoast, Roentgenologist in "Treatment of Cancer by Irradiation Methods", The Surgical Clinics of North America, 1927.*

Prevention of Cancer, Allergy and Infection

This whole text has developed the thesis of prevention and cure of these conditions and some others not classified with exactness.

Removal of All Foci of Infection

The role of suppressed or buried infection in causing chronic diseases has been exposed in detail. It is only logical that such foci should be removed if at all possible. They are Dead Teeth, Infected Teeth Toots, the scarred-in buried tonsil and associated hardened lymph glands, the Infected Appendix that gave an acute attack years earlier, the infected gall bladder. Most of these sources of suffering, and death, can be removed.

Diet and Intestinal Hygiene

The Gastrointestinal Tract; as a source of the toxic amines living in symbiosis with various germs, requires: All the Attention spoken of under Diet, and Intestinal Hygiene. To this end the Enema should be used freely and intelligently to strengthen the bowel wall by washing away the toxins that paralyze it and cause diverticulosis. Special Lavage Systems, are available most everywhere, one can learn to use the Enema at home with good results as well.

Healthy Diet

Correct Eating, as to quality and quantity. The choice of foods calls for the avoidance of selenium containing wheat, etc., and the avoidance of foods poisoned with insecticides. It is within the power of the Food and Drug Administration (FDA), to correct the whole food poisoning situation, and just now public worry over the insecticide and carcinogenic contaminations of the food is calling for some protective action. But this action is even now as stingy as it can be, and no protection against the selenium contaminations are offered as yet. If such neglect continues, it will be necessary for those who are able to organize their own farming services and see to it that the ground is fertilized scientifically by the organic procedure so the plants are correctly nourished and healthy and resistant to insect attack.

In fact, it is demonstrated that insects attack the sickly plants rather than good healthy stock. Selenium-free soil will be used, and crops rotated wisely.

Whole Rye is the superior grain, and the whole grain should be used, washed, dried and ground fine for baking. Freshly ground grain is preferred.

Honey should be used instead of sugar, and Extra Virgin Olive Oil in preference to any other fats. Foods should Not Be Fried (No Vegetable Oils).

Suitable Movement and Exercise

Sufficient exercise to meet the personal needs must be taken and especially such Exercises as Massage the abdominal contents. Each day the muscles need to be fatigued a little.

Rest and Mental Relaxation

Plenty of sleep, free from worries or fears, a clear conscience, forgetting oneself with a healthy interest in the welfare of others so that constructive attitudes dominate, have their good effects on the circulation, and Prevent the Harmful Mental Influences From Dominating the Body Chemistry.

This is particularly true with reference to the harmful Secretion of Adrenaline, Adreno-chrome, etc., that are Thrown into the Circulation by Anguish, Anxiety, Fear, and Insecurity. (Body and Muscle Relaxation, these make for so that there are better Eliminations, and a better coordination between Sympathetic and Cerebrospinal Systems).

Intestinal Lavage

Many amines possess high reduction potentials, and can inactivate the Functional Carbonyl Group of the tissue cells, laying them open to other pathogens, just as the Toxic Amines Absorbed from the Toxic Intestine can do.

In this respect **Toxic Amines were found in recent Psychiatric research to Disturb Brain Function. The stabilizing influence of religion is seen in our ancestors.** They had courage, were not subject to jitters, **and Never Took Calming Dopes, and had much Less Cancer than our generation.**

The Mental Influence Over the Reflexes that Govern Digestion and Intestinal Movements is to be considered here. Spastic bowels with dry walls, the failure to empty the rapidly increasing bacterial poisons, add to the mental instability that brings these conditions about. Calm joy serves otherwise.

In the prevention of cancer it is important to consider the structure and behaviour of the lower end of the large bowel, namely the descending colon, the sigmoid sphyncter, and the sigmoid cavity that ends with the inner anal sphyncter, the short rectal canal and the external anal sphyncter muscle.

Much cancer of the bowel is located in this region, and much intoxication is developed in the sigmoid cavity that poisons the body generally and gives rise to cancer in other parts that are disposed to anoxic effects.

Cancer of the bowel, the sigmoid flexure and cavity particularly, come in people who neglect the emptying of the bowel once or more times a day, and particularly the emptying of the sigmoid cavity with completeness at each movement. The victims are generally nervous people Who Suppress The Act of Defecation; to meet some other activity. Here the Bacteria have their Chance to Continually Reinfect all material that is admitted, and keep the Intoxication going at its highest rate. The Bowel wall gets Poisoned, so it cannot produce the energy necessary to make the muscle fibers contract. The pressure developed inside by accumulation and gas production causes the wall to dilate and form sacs or diverticulae that hold the feces indefinitely, poisoning the wall more and making it dilate still more, in a vicious circle. Obviously: The Obligation Is To Wash Out the Accumulated Feces, and keep on Washing them out twice a day, or oftener depending on the case, but at least to keep the cavity clean and free of the paralyzing poisons. Then the system that has been poisoned generally from the fecal toxins needs a boost in its oxidation advantage so as to defend any poisoned tissues and particularly the bowel wall itself. **It should be understood, too; that not only the sigmoid is injured by the Constipation, but the whole colon and particularly the ceacum at the beginning of the colon.**

A Constitutional Aid is required to give the wall enough freedom from Functional Carbonyl Group inactivation so it can start to have muscle contractions and abundant secretions again.

The Daily Lavage as often as required will give the bowel a rest as well as Remove the source of poisoning.

The Diet will also help in removing the substances that produce poisons at the hands of the bacteria.

When this procedure is carried on long enough the bowel will regain its normal parastaltic habits and the parastaltic wave will progress forward right through the two sphyncters of the anus, and to the outside. **It is an error to state that Intestinal Lavage carried out scientifically causes a habit that one must depend upon ever after.** Indeed: **The Best Possible Aid to Cure Is To Be Had Via The Lavage System. This will result in the complete emptying of the bowel, as one observes in healthy children. The heart, bowel, and all other tissues, will then benefit and have the advantage of remaining healthy.**

Lymphatic Leukemia with Terminal Exhaustion

The liver and spleen were enlarged and tender. He was put on Fruit Juices and Intestinal Lavage for 2 days. The fever at the time was 39°C. In a week he was sent home with a normal temperature. The spleen and liver were reduced in size, but not yet normal, the bloody patches had changed from a dark purple to a greenish colour and no new ones had formed. They then turned to yellow and finally disappeared, 9 weeks later he returned for a check-up, was able to walk, had gained 5.5 kg.

Acute Bulbar Poliomyelitis

During the past 2 years the weakness of the left leg has not changed very much for the better but persists as a slight incoordination, according to Dr Baldor.

A residual, very slight atrophy and corresponding slight flaccid paralysis of the right rectus anterior with very slight atrophy in muscles of left hand are still retained. This shows that the injury is spinal and more or less permanent.

In checking accounts in this case, the full cerebral recovery plus the timely cure of the respiratory paralysis without the use of an “iron lung”, and the retention of the minor spinal injury in such a virulent case of bulbar paralysis, speak well for the method of treatment. **Had the patient had time for a thorough Intestinal Lavage, and the elimination of Interfering Drugs like Aspirin, even the spinal injury may have been avoided.**

Acute Lytic type Case of Hepatitis

Student, appeared with a history of having drunk water that was under suspicion of being filthy 15 days previously.

He had abdominal pain that was Helped by Intestinal Lavage.

The urine was loaded with bile.

There was deep jaundice and profound drowsiness.

His state was subfebrile, and the blood examination on 5 February 1959, showed Bilirubin 5.83 mgms% (Malory and Evilin).

The Van den Bergh was immediately directly positive, the cefalin-Cholesterol positive, **the Thimol Turbidity 5 units, and the Thimol Flocculation positive.**

On 7 February the jaundice had faded considerably and he felt very much better, no more pain or other disturbance.

The bile stained tissues had not completely unloaded until 3 weeks later when the Bilirubin test was almost to normal, namely 0.86 mgms%, and the Van den Bergh and other tests were normal.

On 10 March he was fully recovered and back to school.

Here again we see the restoration of liver cell function, which means the rupture of the viral host cell integration, and the restoration of the host cell to functional structure, required 48 hours.

Advanced Bronchiectasis With Asthma

A woman of 31 years of age, weighed 37 kg and was in a severe state of Asthma and Coughing. The condition had persisted for many days and prevented sleep, and correct nutrition, and brought her to the point of collapse. She raised enormous amounts of pus laden sputum for many years, but the Asthma had persisted only for the past 3 years. A severe sinus infection was probably the initiatory factor. Occasionally during the observation visits she was given a lavage of the nasal sinuses to aid their elimination.

Colon Lavage Was Part of the General Care, Together with Vitamins, and the Vegetarian Diet upon which we insist in all of the cases under treatment.

No honest physician or expert in this dire disease will claim that an occasional nasal lavage would cure a deeply established bronchiectasis when indeed they admit the only cure is removal of the lung or the lobe that is affected. Even such cases relapse, it is found, as the fundamental tissue weakness still remains.

Only the Proper Restoration of the Oxidation Catalysis can Restore the Tissue Vitality.

Percentages and Causes of Failure

In the acute infections, especially the severe type, there is no diet problem, as the patient is not able to take food and has generally vomited what he had.

Intestinal Lavage tends to the rest, and the injection is given in greater concentration. The recoveries have been quick with clean tissue repair.

Even after the best antibiotics have failed, and the nurse advises the doctor his patient will not live till morning, **an ampoule of the Survival Reagent has changed the trend immediately to recovery,** and in a few days the double pneumonia is a thing of the past. The etiological factor is out of the way before the patient is tempted to violate the regime. **Where the eating and drinking habits of the past rule the mind,** recovery may go on so long as the patient is under control, but when he is well enough to go free, **he falls into the way of life that led to his illness. In Cancer cases the etiological factor is not gotten out of the way entirely, until the growth is completely absorbed and the focus of infection that gave rise to the toxin is cleaned out and absorbed by a late reaction.**

Even then some old scars as from an early syphilis may still hold malignant cells that happened to drop in that way, and a still later reaction **may be needed to clean these foci out,** although they generally clear up before the original focus of infection has been cleared away. **Breaking the regime before one is fully cured, and the cure is "seasoned",** permits carbonyl group antagonists to develop and possibly wipe out the defense. **Amines produced from meat in the colon, the harmful nitrogenous or sulphides developed in the intestinal tract by bacterial action, these all hinder or wipe out carbonyl activity and block the activating power of the conjugated double bond systems. Patients are usually grateful that there is a regime worked out that helps them get well, but all are not, and perhaps 30% will desert the regime as soon as they think they are well, which is always too early, and then there may be a slow reversal from the recovery status. Perhaps 30% of our patients waste their chance to get well because of gluttony.**

Others have been ruined by irradiation and while they may improve so they think they are well even for as long as ten years, they are not truly cured and never can be. Ultimately an irradiation anemia will conquer the corrected chemistry.

In other cases, where extensive explorations or exposure of the abdomen to seeding of the malignant cells during a corrective operation, the healing following absorption of the neoplastic tissue may cause widespread adhesions which on contraction compress the viscera and prevent their function. Gall bladder and intestinal obstruction may thus take place, or the pylorus may heal shut. At times the adhesions are so dense it is impossible to correct the situation surgically.

Embolism is an occasional cause of defeat in rapidly recovering cases.

Thus, in some series of cases of far advanced type only 46% are reported cured by experts with this treatment. In some series where most cases are not in the terminal stage, and one would look for a high percent of recovery, only 72% have recovered. **And among the failures, some were not caused by giving up the regime too soon.** Something in the system destroyed the reagent, so it had no effect.

Importance of Divalent and Monovalent Cation Balance

The parathyroidectomy experiments emphasized another matter of the greatest clinical importance. It is the relation of the balance of divalent and monovalent cations to cell irritability. Ordinarily the normal cell presents a disposition of the cations, adsorbed and unadsorbed by the cell colloids, so that a water in lipoid phase is maintained. The lipoids thus diffuse to the perifery of the cell forming a concentration of lipoid there that serves as a limiting membrane, and tends to shut out water soluble materials, while water and its soluble materials tend to concentrate in the center. The effect is reversed by an excess of monovalent cations and accentuated by divalent cations. The monovalent cations thus tend to cause a lipoid in water phase with the lipoids concentrated at the center and the water soluble materials and water at the periphery. This tends to increase the entrance of water soluble substances into the cell.

The Importance of Diet, Calcium Carbonate, Sea Salt and Magnesium

Sodium and Potassium thus tend to increase the cell's exchanges, and the entrance of water soluble toxins. **Calcium and Magnesium tend to reverse this situation. Calcium is important with Magnesium in lessening the cell irritability**, while Sodium and Potassium increase it. Variations play their roles in functional activities of all cells and will be apparent also in the functions of heart muscle. After parathyroidectomy, the increase in irritability of the nervous system followed the loss of calcium from the tissues. The entrance of guanidin toxins gave convulsions of greater severity the more the Calcium that was lost. Calcium transfusions reduced the convulsions for a time, that is so long as the kidney function was maintained. Other solutions as of Potassium and Sodium, and even distilled water did the same for a time, so diluting the blood and washing the toxic element out via the kidneys, showed that Calcium metabolism was not the whole problem after parathyroidectomy. A complicating factor is the normal place of Calcium in activating ATP-ase (group of enzymes that hydrolyze Adenosine

Triphosphate (ATP) to release energy, which it uses to drive other cellular processes like active transport and muscle contraction, these enzymes are essential for all known life and have critical roles in cellular functions, from generating and consuming energy to moving ions and molecules across membranes), for the transfer of energy into the working mechanism of the cell. Here is a chance for energy transfer also to the surfaces of the tissue colloids that aids their dispersion and **Oxygen Transport, to Get Rid of Toxic Materials** and preserve a better colloidal structure in the cell throughout its contents. **Normal cell excitability and response to stimulus is thus maintained by this other function of Calcium.** When one sees exaggerated reflexes, or persistent excitability of a tissue one therefore thinks of the dispersions of the lipoids to or from the cell surface and also the disposition of the monovalent and divalent cations. In cases of high irritability, one would not give transfusions of solutions that would increase the monovalent salt content. Isotonic Salt solutions made with sodium chloride would not be used unless the sodium is balanced by calcium and some sort of a Ringer's solution would be used. Even the sera of the blood banks could be taken from individuals with high sodium chloride blood content. These matters deserve consideration. **Our Diet calls for Calcium in Plentiful Amount, as Crude Calcium Carbonate. We also give the potentized Calcium as carbonate to cancer patients.** This is to diminish the nutrition of the sodium rich cancer cells, and to reduce the pain caused by the ever present incompletely combusted metabolites that enter the nerve endings in the affected areas. **Calcium, and Good Intestinal Lavage, and A Well Chosen Diet Go a Long ways in abolishing the pain in cancer.** Likewise the carbonyl reagents tend to burn the incompletely combusted metabolites out of the way so they cause no more pain. The cancer cells also under good Calcium supply do not tend to swell up so much and cause so much pressure, for the reasons just mentioned. **All of these factors enter the Treatment of the Neuroses and Psychotic States.** An illustration of the parallel run of toxins with failure of the use of Calcium is seen in the treatment of dairy cattle that were badly diseased by hemolytic staph, aureus infections of the mammary glands. After the carbonyl (SSR) therapy was used, both the hemolysins disappeared, and the Calcium content of the blood and milk increased. The lactiferous cells were able to use the Calcium for cell building and for milk production, and the germ no longer produced the hemolysins. This work was done at the University of British Columbia and by the scientists of the Ministry of Agriculture. **Thus; The Toxic Inhibition of the use of Calcium Must be Removed to obtain its full biological effect."** - Professor Dr William Frederick Koch, MD, in "The Survival Factor In Neoplastic Diseases", 1961.

The Inroads Arising of Septic Poisons

The Emunctology Treatment its Aimed at Preventing and Resolving:

1. The inroads of the arising of Septic Poisons from the continual flow of pus, that affects the Emunctory, and Lymph Circulation, and causes an Improper Coordination of the Eliminating Forces of the System, the Emunctory System.

2. The Skin: If Toxaemia, would not be thrown off in the Epidermis "Skin" (through the Lymph and Capillary Circulation), the Intestinal Tract would be full of Pinholes (can develop in a diverticulum or peritonitis);

3. The Lungs (Purification of the Blood Supply): Or, were it to go to the Lungs, there would be Tuberculosis;

4. The Heart: Were it to go to the Valves of the Heart, it would be Heart Trouble (as the Medical Trade would call it);

5. The Liver: Were it to go to the Liver, it would be Cirrhosis of the Liver;

6. The Spleen: Were it to go to the Spleen, it would be a Hardening of one end of it;

7. The Brain: Were it to go to the Brain, it would be Softening of the Brain (these cause disturbances in the physical forces of the body, such as senility, that is, impulse in the gray matter in nerve force be lacking, thus gradually, unless measures are taken, there must come the softening of the brain cells, so that the reflexes will gradually become less and less active, for the flow of blood as well as impulse in the circulation through the central portion of brain cell, from the lyden "leydig" glands and the activity of the organs in the pelvic area);

8. The Glands: Were it to go to the Glands of the Throat or Thyroids, it would become Goitre; were it to settle in some other portion, were it to Settle, it would become a Tumour of some character or nature.

Intestinal Toxaemia in its Relation to Cancer

"Intestinal Toxaemia, in its relation to diseases, not excepting malignancy.

Intestinal Toxaemia is no new subject.

For the past hundred years an enormous amount of work has been expended upon it, both medically and surgically, in an effort to counter its ill effects, and even back to the early days of our profession we find treatment and drugs which had as their object, **their one and main object: The Cleansing of the Bowel.**

But as the importance of this condition is being recognized, and as further work is being done, so we are better able to understand the details of its nature and the more exact conditions by which it obtains its deleterious results.

The powerful and far-reaching effects of Intestinal Toxaemia are as yet only beginning to be understood. **Its wholesale ravages upon civilization, ravages the more difficult to understand because of its insidious nature.**

The sure, steady lowering of resistance, and the predisposition to disease, and the benefits that accrue from its removal, in the vast majority of all diseases, is yet to be appreciated by the profession.

The primary cause of this abnormality is essentially Diet, and secondly, infection, **which is able to take place only through Incorrect Food, and how important a part these play in most diseases and that the predisposing causes of Cancer are no exception.** Food is the fuel of the human engine, supplying the need of every minute cell of that most wonderful of all machines, the human body. But, if the fuel is deficient in its necessary characters, it not only becomes a source of diminished energy, but allows another host of possibilities in the production of poisons and deleterious substances fatal to the perfect working of the individual.

There cannot be the least doubt that civilized Diet is radically incorrect, it being out of all reason to suppose that our present methods of cooking, and **general treatment of food are in any way compatible with the laws of nature.**

1. **Intestinal Toxaemia owes its origin to Errors in Diet.**
2. **To Infection; which can only occur when the conditions of the gut are abnormal.**

This condition is present in almost all, if not every individual living on such a Diet. Its presence may not give rise to symptoms for months, years, or until old age, as disease depends considerably on the individual to resist poisons, though to a certain extent on the variety of the organisms connected with the Toxaemia.

Abnormal Diet may begin at birth, as in the case of artificial feeding, more commonly at the end of the first few months.

Considered from a natural history point of view, **the human species was undoubtedly intended to live on the fruits and products of a vegetable nature of the tropics**, and possibly on the flesh of the smaller animals, but whether man was intended to be a vegetarian or a carnivore **one thing is certain, that our present cooking, storage, and tampering with food were not allowed for in the universal order of things.**

Thus we shall see later, **an abnormal content in the bowel begins with us early, and persists throughout life.**

It is possible that given the Normal Diet from birth abnormal organisms in the intestines would probably fail to become permanent residents although they are so universally present.

An enormous number of chronic diseases can be treated successfully on these lines. That 25% of all cases of definitely advanced inoperable Cancer treated by these methods show a temporary improvement and relief of symptoms, and generally have a more comfortable time.

If 25% of advanced cases of Cancer show even the least sign of benefit, and it is possible to claim more than that.

The Deficiencies in Natural Food:

1. Absence in Essential Products Necessary to Health, such as: Vitamins, and Minerals, etc... .

The deficiency of vitamins and substances necessary to health is so accepted and has been so proven, bearing in mind the outstanding cases such as rickets and scurvy, and yet when more research has been done it will probably be shown that **minor deficiencies extending over a long period of time have a serious effect on the general metabolism.**

2. The lack of substances necessary for the bacterial content of the intestines to ensure cleanliness.

For the intestines to be kept clean, certain organisms are necessary, and these can only exist when provided with proper food. The cleansing bacteria of the gut are the lactic acid bacilli, as from the acids they produce they prevent putrefaction, and cause a healthy and comparatively sterile excreta.

3. The presence of substances from which toxins can be readily made.

There is present an excess of flesh protein from which poisons of a toxic nature can be so readily produced. The comparison between the faeces of those living on an average diet and of those taking a large amount of raw material has been very interesting and very striking.

The average colour is darkish brown, whereas it should be pale brown.

The average smell is what is described as fecal, whereas there should be no odour, or at the most a slight smell as of sour milk.

Chemically, most of the putrefactive bodies such as Skatol, and Indol are absent, and finally, the bacterial content differs enormously in the two.

The ordinary specimens being composed mostly of B. coli, streptococci, spore-bearing bacilli and abnormal bacteria, whereas the only organisms found in a healthy stool are the Lactic Acid Bacilli and B. Coli.

This great contrast alone should be sufficient to convince anyone of the advantages of correct diet, and the benefit the individual must obtain from the absence of all the usual putrefactive material.

In the healthy intestines that I have described abnormal bacteria can only exist with difficulty, and are unable to produce their toxins readily.

The natural scavenging organism of the intestine, the lactic acid bacilli, practically dies out when the fecal content is [over] alkaline. [Note that the body should not be ever, neither over-acidic nor over-alkaline. The normal pH range for human blood is between 7.35 and 7.45. This Slightly Alkaline or Basic pH Is Crucial For Many Biological Processes, including blood Oxygenation]. We now come to those abnormal bacteria which are mostly responsible for Toxemia.

They are bacilli of the Gram-negative type, which do not ferment lactose.

A large number of varieties of them have been worked out in detail, but the number of the different forms is so enormous that it is impossible to classify them all, and it is sufficient for the present to put them into groups.

These Organisms Are Not Pathogenic, in the ordinary sense of the word, in that they do not produce disease, although they may occasionally be responsible for local conditions in the intestines, but their danger lies in their prolonged, continued action, and the Toxins which they are slowly producing throughout life, gradually and insidiously lowering the vitality of the individual, and giving increased susceptibility to both acute and chronic disease. According to the virulence of the Toxaemia, and possibly equally important according to the resistance of the host, so depend the number of years necessary before symptoms are developed.

In most cases the human subject becomes infected early in life, and so commonly are these organisms found, not only in the adult, but also in the child, that they might be considered, as they even are in some laboratories, as more or less normal inhabitants, were it not for the dramatic results obtained in the treatment of chronic disease by their removal.

Treatment consists of 2 distinct parts, with the object in view of removing the Intestinal Toxaemia:

1. The Diet should be so arranged as to contain the least possible amount of material from which toxins can be manufactured, and most suitable for the growth of scavenging bacteria and inhibition of abnormal organisms.

2. To remove the toxin-producing bacteria from the patient.

The Diet consists in removing all forms of cooked flesh, as it is from this poisons are so readily produced, and keeping the patient almost completely on a vegetable, fruit, nut and cereal diet. This alone enormously reduces the amount of toxins produced in the intestines; also, if continued for a long period, ultimately tends to remove pathogenic bacteria. **I have given you an outline of the conditions of a Toxic Intestine. The difference of the average excreta and the clean wholesome faces of a natural diet, without putrefaction or odour, obviously must have an enormous influence on the individual, also the completely different flora which is to be found. The removal of this condition allows the body to fight in a most efficient and surprising way even advanced disease itself.** The tubercle bacillus is mostly accepted as the cause of consumption, yet how little has the discovery of that germ helped to fight the disease, except by guarding from infection. **The tubercle bacillus itself is unable to become dangerous except under the conditions of a lowered vitality, and in most cases of Consumption (Tuberculosis) much benefit is obtained, even after the disease is well established, by the removal of the underlying Toxaemia. So as in consumption, this applies to a large number of the chronic diseases, the general treatment being to improve the condition of the patient, and the individual will then cure himself of the local condition, and one of the surest methods of raising resistance and causing a general improvement is by Cleansing the Intestines (Colon Irrigation), and relieving the body of the poisons so usually generated therein.** It will interest you to know that from experiments that have been done many remedies of a more deeply acting nature have a profound effect on these abnormal bacteria, and it has been demonstrated that their action is similar in every way to the result of an injection of vaccine.

Malignant Disease

There is a growing tendency throughout the laboratories of the world to suspect Diet as a predisposing cause to Cancer; many various modifications of food have been tried, in some cases with distinctly favourable results; my own experience during the last 8 years, on those cases which I have had the opportunity of treating, is that without claiming a single cure, **25% of advanced, and mostly very advanced, cases received temporary and definite benefit.**

And if the removal of Intestinal Toxaemia can so improve even the most advanced cases, how much more should its absence throughout life completely prevent the occurrence of this dread disease? Most of the cases with which I have dealt have been in the last stages. I will now give you a few examples of some of the best results that have been obtained; nothing miraculous, but you must remember that **they were all terminal cases, and that the consistency of the results has been far too steady to make any chance of coincidence possible.**

Case 1 - Mrs F.C., aged 37. March 1923. Had breast removed 2 years previously. Present condition, growth in both lungs and liver. Effusion in both pleura. Sternum markedly bulging; continuous vomiting: pulse 130; respirations 32. First dose, March 16: Marked benefit after 24 hours. **General improvement continued for 3 weeks. Second dose, April 5: More marked improvement; patient able to get up. Improvement continued, and after a few weeks patient leading an almost normal life.** Respirations and pulse becoming normal; and the fluid diminished. No increase in size of growth. Third dose, June 15: Steady improvement through June, July, August and September. Patient did moderately well till the middle of December; she was taken suddenly ill December 27 and died on the 28th.

Case 2 - Mr J.B., aged 63. Solicitor. Carcinoma of gall-bladder and liver. December 1919, patient in great pain and distress. Huge mass of liver. Morphia necessary for pain. First dose, December: Relief of pain within 48 hours. General improvement followed during the next 3 weeks. At the end of a month patient up and about, and resumed his duties which he continued until July. **During this time the growth slightly diminished in size; but the pain and distress entirely disappeared.** Two further doses were given. In August the patient was suddenly taken ill with apparent heart failure, and died within 3 weeks.

Case 3 - Mr W.S., aged 72. Carcinoma of the tongue. Tongue had been removed and an extensive growth in the floor of the mouth and the glands of the neck. Considerable pain and frequent small heemorrhage from the mouth. First dose, November 7: **The pain and hemorrhage both ceased 24 hours after the dose. The growth became cleaner. Other doses were given on 14 December, 29 January, and 18 February. There was no further pain nor hemorrhage. The growth remained stationary** until February, when it started to enlarge slightly. Patient died suddenly on 1 March.

Case 4 - Mrs M.R., aged 66. Advanced Carcinoma of the Cervix. Considerable hamorrhage and some pain. First dose, October 25: **Hemorrhage and pain ceased until December. Second dose, December 9: General condition improved.** Slight hemorrhage January 15. Third dose given: **General improvement up to May.** Not quite so well. Fourth dose, June 5: P**atient still alive and slightly better.**

Case 5 - Mrs E.M., aged 62. Advanced Carcinoma of the Cervix. Confined to bed. Considerable pain and distress. First dose, 15 February: **Considerable improvement. After a week patient was able to be about. Second dose given in March and the third in June. Patient's condition is still very fair, and she is able to be about and assist in the doing of ward-work.**

It would be possible to continue citing such cases indefinitely, and such are the average results of those cases which respond well: diminished pain, frequently completely absent, and an improvement of all symptoms, with a more or less shrinkage in the growth, the patient being rendered more comfortable, and the end when it comes generally being sudden or after a short relapse.

The Fundamental Points Are:

1. That civilized Diet is unnatural, deficient in necessary properties for health, and also to ensure the Intestines being able to be kept in a Clean state.

2. That the conditions which arise in the Bowel as a result of this allow an Abnormal Flora, an absence of the purifying organisms, and the presence of Toxin-Producing Bacteria, with the result that the faeces are objectionable and dangerous.

3. That removal of this condition, and Cleansing of the Gut, causes a most remarkable improvement in the general health, and usually also in most chronic diseases, without any local treatment.

4. Intestinal Poisoning is no longer the vague apparition of the past, when Stasis alone was supposed to be the main cause. We now know the necessary diet to eliminate the foods from which toxins are most readily formed, the bacteria concerned in its production and the toxins themselves can be isolated.

Toxaemia depends not so much on Stasis, as the Content of the Gut; if no poisons be present, even when Stasis exists, naturally there can be no absorption; but if the Faeces are foul, no matter how rapidly they pass, there will be a certain amount of absorption into the Bloodstream.

Usually When The Condition of The Intestinal Content Becomes Clean, There Is Such An Improvement in Muscular Tone, and General Health that Constipation Ceases." - Dr Edward Bach MD, in "British Homeopathic Journal", October 1924.

"During the frenzy of one of the Cancer Week scare campaigns, someone asked the question: "Is there not some danger in developing "cancerphobia" in the public mind by this scare-head publicity?" Dr John Cerster, chairman of the New York Committee of the Society for Control of Cancer, replied:
"It would be a good thing if it did; anything that would scare the people into going to a physician for an examination would be beneficial."
The Financial Benefit to the Medical Trade is apparent but the benefit to the people is in reverse ratio to the amount of diagnosis and treatment given.
This is obvious since the cancer rate has quadrupled within the past 10 years.
Dr G. Earl Thomas has charged that:
"Cancer is the most profitable disease that the members of the America Medical Association Have."
One of the noted American cancer authorities, Dr L. Duncan Bulkley, senior surgeon of the New York Skin and Cancer Hospital, denounced the popular medical claim that cancer is a "surgical disease" when he stated:
"Cancer is not a surgical disease. Neither surgery, not X-ray nor radium have changed, in anyway whatever, the ultimate mortality of cancer in 40 years. It was 90% in 1884. Now it is 92%". *- in "The Poisoned Needle", Suppressed Facts About Vaccination", 1957.*

What Fulfilment Will Emunctology Bring to the Practitioner

For the Improvement of the Physical Body, each individual should be Mindful of its Diet, as well, as for the periodical need of the application of Hydropathy, the effects of water, and its beneficial effects upon the physical body. The Emunctologist, with the vibratory forces of manipulations, or of Neuropathy in its effect, so may the body direct for Self, those same conditions that are beneficial. Emunctology as a vocation offers a channel through which the body, mental and physical; may find self-expression in aiding many, in that as a Teacher, whose lines are those in keeping with development of Body and of Mind. Knowing this is not All, but a Channel that may be used for individual application of those necessary elements in individual forces.

The Therapeutic Value of Neuropathy

Neuropathy correctly applied will bring Much improved in the General condition of any body, aiding, giving strength to the coordinating influences in the mental, and physical forces of any physical body. Thus, the Neuropathic Treatments, aid, by helping in restoring the proper coordination's.

The Neuropathic Treatments, these followed the correct vibrations as related to the low electrical applications. For example, the more Extensive applications for the vibrations, that may be carried by the Massage or the Neuropathy, or Neuropathic Applications to the body; also applying the corrections in those centers in the lower portion of a body, that is, through the lumbar-sacral-coccyx area, make for the better absorption in the body. The Neuropathic Massage of a body from the centers of the 4th lumbar plexus, and the limbs, produce a stimulation to the superficial circulation, these will aid in reducing tiredness, and enable the body to move. The Neuropathic Treatments, help to expand and relax the body, rather than corrections through vertebral forces or of the taxation of muscular tissue. Rather the nerve end With tissue needs following out.

Thus Neuropathic Treatments are more gentle, than those of Osteopathic Manipulations, for each have their Correct Application, as does the Chiropractic Adjustments.

> ***"The Basis of Manual Therapy, according to Dr John P. Arnold, MD, can be looked for in the Vasomotor Mechanism. This Should Be Thoroughly Understood by the Physician."*** *- in "JAMA", 6 June 1903.*

Thus, Neuropathy is, and needs to be, in itself understood by the Physician who gives these Neuropathic Treatments, that Neuropathy is that which aims to help the body forces, to rebalance, re-align, thus aiding those forces, by giving strength, bringing force to the Nervous System. Often there is the need for 15 to 20 of such Adjustments and Manipulations. After these Properties, Treatments have been taken by the system, these Neuropathic Treatments should correct any body to its full development, in that coming about in each body.

For it is Only then, Does the Emunctologist Becomes: Optimum Therapeutae

Healthful Routine of Living

"The Healthful Routine of Living Includes:

1. Ample Sleep: Younger children should have midday rest periods as well as ample sleep at night.

2. Plenty of Outdoor Air and Sunshine: As far as possible, play should be out of doors The More Fresh Air, The Healthier The Child. It is possible to have fresh air inside the home, but more difficult to get plenty of sunshine too.

3. Proper Food: This includes a well-planned Diet; plenty of milk and other fluids; sparing use of sweets.

4. Careful Attention to Elimination: It is apparently true that the individual with Poor Elimination (constipation) has less resistance to disease.

5. Development of Habits of Personal Cleanliness, such as frequent washing of hands, brushing of teeth, cleansing of mouth and nose." - in "Health Through Prevention and Control of Disease", 1926.

Health is Balance

> ***"Balance of all aspects of your being: Physical, Mental, Spiritual. The daring is yours, the work is yours, the determination is yours, but God is with those who help themselves; the Lord is with you. There are fundamental causes of illness in the spiritual and emotional realm, and causes in the physical realm. They are interwoven, and one has to diligently undo the many knots, one by one to bring back balance. Balance Is the Key Word of Nature; Balance Is the Key Word of Health."*** *- in* ***"God Helps Those that Help Themselves"****, 1894.*

The Part Taken By Nature and Time in the Cure of Diseases

"1. All vitalized matter; is the subject of a law of development peculiar to its class.

2. Vital organizations are not active "per se", but are endowed with a capability of activity under stimulation.

3. Normal Stimulants Produce Physiologal Activity: Health; Abnormal Stimulants Produce Pathological activity: Disease.

4. Human maladies are always the result of abnormal stimulants acting on the histological elements of the body.

5. Disease in any part continue as long as the pathological stimulant is operative; when this ceases, the part returns to its physiological state.

6. To Cure Disease It Is Only Necessary to Remove the Stimulant Exciting It.

7. The duty of the physician is to watch nature and assist her as opportunity may offer.

8. All perturbating medicines are themselves pathological stimulants.

9. The popular professional estimate of the medical virtues of drugs rests, mainly, on the vicious logic of post "after this, therefore, because of this".

10. That this estimate is erroneous, is proven by:

A. Curable diseases are recovered from in the absence of all kinds of drugs.

B. Curable diseases are recovered from under the most diverse treatment.

C. The state of the patient's mind makes the operation of even pure drugs uncertain.

11. A recognition of the doctrine of the "vis medicatrix naturæ" (the healing power of nature), must underlie all rational therapeutics.

12. The principle involved in this phrase has been recognized and deferred to, since the earliest historical era of medicine, and is likely to be immortal.

13. It derogates nothing from the physician, or the agents he uses, that nature is predominant, and Art Bringing Help, Aid, or Assistance." - Dr James F. Hibberd, MD, in "The Part Taken By Nature and Time in the Cure of Diseases", Massachussetts Medical Society, 1868.

Patterns of Social Adjustment and the Epidemiology of Disease

"Understanding of how Man's Interaction with Social Forces in his Environment Determine his Health and Welfare and are therefore relevant to Healthcare practice. It illustrates the importance of understanding the patient as a person before the diagnosis and treatment can be effective.

"Patterns of Social Adjustment and the Epidemiology of Disease."

"Pathophysiological Patterns and Disease as Adaptive Behaviour."

"Patterns of Disability." This book is for students who cultivate an understanding of human ecology and the relevance of changing social patterns to disease. **"Talking With The Patient", provides guidance in the technics of interviewing and illustrates that effective diagnosis and therapy often requires the physician to understand his patient as a person. The need to be needed, to have a place in the scheme of things is fundamental to the human spirit.**

"The Care of the Patient Begins With Caring for the Patient." *- Francis Peabody*

Man's Needs and Expectations

The course of history has changed as man, always striving to satisfy his needs of Body and Spirit, has perceived them differently from time to time.

Man's interactions with all aspects of his environment including social forces determine his health and welfare. The study of the lofty aspects of man's spirit ought to prove as interesting and as fruitful as the study of his more earthy qualities. It is necessary to help one another. It may be that the positive nourishment of the spirit of man may contain an important key to his health and growth. It may be, indeed, that we will find that altruism is a hard, practical asset, just as cooperation turned out to be. Altruism may provide third dimension to evolution and accelerate even further man's quest for his goals.

When it was learned that cooperation had more survival value than competition, a really startling contribution to progress had been made. It may be that generosity of spirit has even more power. There is certainly widespread evidence that a primary concern for the welfare of others leads to great comfort and satisfaction for the party of the first part. Isn't this what happens when an organization has superb morale? Or in the many human situations where superior teamwork wins? There is ample evidence that the nourishment of the spirit is relevant to bodily health and performance.

In the famous Hawthorn experiment, when the company officials wanted to find out whether fluorescent lighting would increase the efficiency of the working girls, they installed it in one of the workrooms.

The productivity of the group working in that room soon exceeded the productivity of all the other groups. Then it was suggested that the girls might do even better if the walls were painted a pastel shade. That worked, too.

Really interested by now, the management decided to test the effect of increasing the height of the workbenches by 6 inches. Again productivity increased, but then it was discovered that lowering the workbenches by 6 inches had the same effect. Ultimately, **it became clear to the officials that what was helping these workers toward better achievement was the evidence that someone was interested in their welfare and comfort. From a vast number of experiences, man has shown that his health and well-being depend not only on his capacity to adapt to the tangible environment, but also to prevailing attitudes and values in his society and to his own goals and aspirations.**

Today, when the emphasis is on human ecology and the pertinence of **changing Social Paters to Disease**, all the more aware of cultivating a world perspective. It may be trite to point out that **adaptability to challenge and to change is virtually synonymous with health. Thus a strong sense of group identity, a feeling of being needed and valued is an important requirement of individuals in a healthy society. Interdependence is a very Fundamental Principle among living things. Sleeping - Sleep is as essential to the adjustment of the organism to his surroundings, as eating is to survival. The Amount of Sleep Required, and the timing of the sleeping — waking cycle may vary widely from person to person, but Everyone Must Sleep and probably no one can last more than 200 Hours Without Sleep, without Suffering Damage."** - in "Behavioral Science in Clinical Medicine", 1976.

> ***"Total, prolonged sleep deprivation, can be fatal. The study "Sleep deprivation in the rat", Sleep, February 1989, showed that a total lack of sleep inevitably leads to death. Harvard Medical School neuroscientists have identified a causal link between sleep deprivation and premature death. In a study on sleep-deprived fruit flies, published in Cell on 4 June 2020, researchers found that death is always preceded by the accumulation of molecules known as Reactive Oxidative Species (ROS) in the Gut. When fruit flies were given antioxidant compounds that neutralize and clear ROS from the gut, sleep-deprived flies remained active and had normal lifespans. Additional experiments in mice confirmed that ROS accumulate in the gut when sleep is insufficient."*** *- in "Sleep, death, and... the gut?", The Harvard Gazette, 4 June 2020.*

On Practical Clinical Observation

"Unlike Pathology, a purely Theoretical Science, Clinical Medicine is Eminently Practical.

She studies each patient individually, rigorously analyzes the symptoms, the material disorders, seeks the link that unites them, applies herself to determining the aetiological and pathogenic conditions, and finally draws from all this set of prognostic, and therapeutic indications.

This result is only possible, however, by taking the Anatomy and Physiology normal as a basis, because knowledge of the Morbid State necessarily depends on that of the normal state, like the therapeutic action of medicinal agents is necessarily subordinated to the prior study of the normal agents which maintain the phenomena of life.

An individual is admitted to the hospital for a severe headache, it is minus the phenomenon he mainly complains about.

Asked about the characteristics of his pain, he replied that it occupies the forehead and also the occiput, that it is violent and causes a sensation of tightness, of constriction, similar to that of a bond or a helmet applied on the head, which finally causes slight nocturnal exacerbations, and is accompanied by insomnia.

Taking into account the location of the pain, the sensation of constriction which accompanies it, the nocturnal exacerbations and the insomnia, the doctor is led to surely diagnose the existence of a uraemic headache, because no other headache pain presents these characteristics, not even syphilitic headache, always better circumscribed and of excessive intensity.

Another patient feels in the legs and sometimes also in arms painful, unbearable sensations of tingling and tingling.

Limited to the extremities, these sensations are symmetrical, are exacerbated under the influence of the heat of the bed; the feet are sweaty and yet cold; sleep is difficult, disturbed by nightmares, terrifying dreams; upon waking up, the patient feels dizzy, nauseated, and has green or white pituits.

This symptomatic picture can only be that of alcohol poisoning, because each of the symptoms reported has its own physiognomy, to the point that just one of them would be enough to establish the diagnosis.

Let's add to this picture, exaggeration of the plantar reflexes, hyperalgesia of the lower limbs, of the abdominal integument, especially the emergence of the nerve threads, and the conviction of Intoxication, no longer by alcohol, but by prolonged use of drinks containing essences, such as vulnéraire, absinthe, etc., will inevitably be essential." - Dr E. Lancereaux, MD, Professor of Medicine, in "Leçons de Clinique Médicale", 1892.

"In wonder all knowledge begins." *- Robert Browning, in "Sartor Resartus", 1837.*

Physiologic Therapeutics

"It should be manifest that all Disease, and all Treatment should be regarded in terms of departure from Correct Function, and All Remedies Should Endeavour to Restore Healthy Function. Drugs are often deleterious otherwise, either by interfering with nutrition, disturbing metabolism or poisoning the nerve or muscle cells. One can not object on these grounds to the regulation of bodily functions known as Physiologic Therapeutics, for only **Obtuse Empiricists Will Do Serious Harm in using agencies which are nature's own. The number of such men diminishes in proportion to the opportunities for receiving instruction in the nature of the processes which occur in the body in health and disease. In Other Words: The only safeguard against harmful treatment of disease is a knowledge of living function in health and disease.** This consideration is particularly pertinent as regards the diseases of the nervous system. **Recent neurological labors have supplanted confusion by precision; and the processes at the root of many nervous perturbations become clearer every day. Auto-Intoxications, the disturbances of the internal secretions, the serious effects of purely psychological attitudes, and the role of the infections.**

Hence, the general insistence upon all the elements of a course of Treatment, which comprised:

1. Rest.
2. Massage.
3. Diet.
4. Exercises.
5. Baths .
6. Electricity.
7. Occupation.
8. Encouragement.

Pharmaceutical Blunderbus

This often succeeded where the Pharmaceutical Blunderbus Had Failed.

For the Pharmaco-Dynamics was applied in the very direction To Do Most Injury to the patient. For Instance:

1. The giving of Bromides to patients whose agitation was in reality due to impaired efficiency of the cerebral cortex.

2. The giving of Strychnine in fatigued states, where cells required rest and not whipping.

3. The producing of sleep by Narcotics, when the need was Oxidation rather than Stupefaction.

4. The Prescribing of so-called Anti-Spasmodics in cases of which the pathogenesis was purely Psychical (mind, psyche, or spirit), and where the Physical results - Are Best Treated When Most Ignored.

Therapeutic Measures Upon Physiological Means

But of the Physiological Means, none in itself was out of harmony with the needs of the organism even in health:

1. **Oxidation - was Stimulated by Baths and Massage;**
2. **Fatigue - was Diminished by Rest;**
3. **Tranquillity of Mind - was given by Abstraction from Cares;**
4. **Intoxication - was Diminished by an Appropriate Diet; etc...**

Only the cause of the disease escaped attack; **the patients were not taught the reason of their illness, nor how to live in the future; hence relapses were frequent. The proper treatment is to remove the cause by prescribing a proper diet, and to teach the patient how to keep well by controlling his food.**

Diet

1. Proportions: Imperfect metabolism creates many neurotic conditions.

Hence the exchanges should be studied in each case. An exacerbation of phobias and emotional agitation is often determined in a Psychasthenic patient by a series of meals. In all patients susceptible to Intoxication, the Saline Element of the Food should be abundant, and Fruit Should Be a Main Part of the Dietary. This also aids in preventing the Constipation which so often aggravates the Neurasthenic Symptoms of these patients, giving rise to lethargy and aboulia. Fibre and cellulose should be abundantly taken also.

2. Purity: In these days of adulteration, the greatest care cannot be taken to obtain food neither coarse nor impure. The Slow Intoxication by Foods Decomposed in Storage Must Be Injurious To Many Patients; and the Addition of Preservatives is to be still more Strongly Deprecated.

Exercise

This is of paramount importance for the rectification of disturbed function.

I need not speak of Fraenckel's exercises for restoring locomotion in tabetics.

These are in reality re-education rather than pure exercise. **I wish to Emphasise The Importance of Persistent Exercises in the Treatment of Paralysis:**

I Need Not Insist Upon the Power of Proper Muscular Exercise in Aiding Metabolism by Promoting Digestion and Elimination, and of its Effect in Aiding the Cardiac "vis a tergo" (a force from behind).

It is most important when depletion and fatigue are greatest, a fact rarely realized in nervous affections, although **in cardiac disease there is so brilliant an example of the benefits of graduated exercise.**

Frequently the neglect of proper exercise is responsible for the failure of treatment otherwise well ordered towards remedying an affection of the nervous system.

Massage

To Remove Catabolic Substances Stagnating in the Lymphatics, Massage Is Perhaps The Most Powerful Means; In This Way It Stimulates Nutrition.

It has a Soothing Effect, perhaps through Stimulating Afferent Nerves.

Its Power of Removing Exudates is accounted for by Directly Hastening the Circulation through the veins and Lymphatics of the part, and the Indirect Effect of this Upon the Arteries Supplying the Part, and Upon the Rest of the Body.

In lower neurone paralysis, it has no direct influence upon the restoration of structure; and it merely compensates for the normal stimulus given by the movements of the limb to the Lymphatic and Venous Circulation.

The squeezing of the muscles in Massage is easier borne, and can be more easily graduated in painful peripheral affections than can active muscular contractions; but: **Gradualness and a Very Fine Touch Are Essentials.**

Baths

No measure has a more beneficial influence than a Bath when prescribed in the proper situation. **The calming influence of the Warm Bath in agitated mental states extends even to the insane. The Cold Bath Is Indicated in certain Neurotic States of which Indolence is a feature; but it should be prescribed with the definite Indication for Removing Lethargy, and should be supplemented by other methods with the same end in view.**

I need not enter into the **Eliminative Effects of Warm Baths**, for they are well known. **The use of the Bath to minimize tension and strain of the muscles in the course of the meningitis of poliomyelitis must not be forgotten**; and the suspension of the body in water, too, greatly facilitates the first feeble movements during recovery from that disease.

[See: "Report of New York Committee, Monograph Series", 1910]

Electricity

Electricity, like other remedies, should be used only with a clear object conformable with its physical properties.

One of the most useful of these objects is the maintaining of life in muscles which would otherwise degenerate on account of injury or disease of peripheral motor neurones which supply them.

Such are cases of poliomyelitis and of trauma of peripheral nerves.

In each of these, the life of the muscles should be maintained by galvanism for perhaps a year, until it is ascertained what cells or fibres are definitively destroyed, and which of them can be restored to function.

I can not speak from experience of **the ability of galvanism to promote nutrition other than by the excitation of contractility; but many authorities believe that its intelligent application fosters regeneration of the tissues.**

[Please see: Poliomyelitis, Virginia Semi-Monthly, 25 August 1910; Monthly Cyclopedia. Nov. 1910].” - Dr Tom Williams, MD, in “Physiological measures in the Therapeutics of Nervous Disease”, The American Journal of Physiologic Therapeutics, January 1911.

Clinical Health Books should not be boring, on the contrary, a real, authentic and truthful Clinical Health Book is: Thought provoking all inspiring and most important, useful! The reader must be able to understand it, and learn from it.

What Can Emunctology Teach

“It Can Certainly Teach:

1. **Honesty**
2. **Restraint**
3. **Application**
4. **Desire and need for Hard Work**
5. **Patience**
6. **Tolerance of Frustration**
7. **Avoidance of Deceit**

It can Teach the Value of Curiosity, Observation, Experiment, and the need for Formulating Testable Hypotheses.

It can teach, a basis for operating on the next day’s adventure with nature.

It can teach the recognition that the perceiving of an order in nature has in itself a moralizing effect. It can emphasize tolerance and willingness to consider the inferences of others, and it can weigh or give weight to the aim of leaving one’s specific scientific discipline better than one found it.” - in “The Place of Value Systems in Medical Education”, 1960.

> ***“Increase of Knowledge Greatly Increases our Power over Disease.”*** *- Dr Alexander Haig, MD, in “Uric Acid as a Factor in the Causation of Disease”, 1897.*

How Emunctology; Can Aid Humanity

Man's Development, is of man's Understanding and applying the Laws of the Universe, and as man applies those, man develops, man brings up the whole generation of man. Individuals we find carry out certain elements and laws, and gradually man becomes capable of applying and using those in the everyday life of man. This, whether applied in Emunctology, in Anatomy Science, in Mechanical Science or what not, is merely the development, or the application as man applies to Universal laws as are ever, and have ever been, existent in the Universe.

Emunctology, as a Precise Field of Health-giving Therapeutics, represents that which it is beyond the reach of any medical science, as seen, save from an unseen source. The Science of Emunctology, among other things; Should Make a Definite Contribution to the Effect of Various Forms of Anaesthesia upon the Brain, and the Nervous System.

As to the use of Electrical Forces, as to the Application of those forms of Anaesthesia, and especially to that of the Mental and Brain reactions.

Each Emunctologist, should aim always, in their contributions, to aiding individuals to Adjust their Bodies, and their Minds to Creative Influences in their own experience, From the Physical as well as Spiritual Angle.

The power of suggestion, in the knowledge of the influence of environments, and of reactions to the various impressions received in the reaction of impulses in the physical body.

If one wants to learn Emunctology, one needs to Study also the History of Clinical Health Care, and Nutrition.

The Study of the Digestive System, Glandular Systems, Circulatory System, and all the anatomical systems, in their relationships to the human body.

There is to be considered ever the Whole Activity; not as separating them one from another, but the whole anatomical structure must be considered Ever as a Whole. The Crown Research of Any Emunctologist; Is the Study for 36 months, of the Condition, that Disturbance called Epilepsy.

The Most Important thing of All: One needs to select, and choose ones Source of Information, seriously and carefully. For if the source is of ill, or wrong advise, being one based on ignorance, one will not be a Doctor of Health in Emunctology, but a Doctor of Poisons and Toxins in Medicine. Thus it should be the task of The General Emunctology Council, through its work, to give much to the world. Knowing that The General Emunctology Council, is and always will be at the very centre of the Sovereign Civil and Military Hospitallers Order of the Good News.

Our Organism Possesses an Inexhaustible Creativity and Remarkable Self-Healing Capabilities

“In regards to diagnosis of Cancers, around 40% of routine examinations, reveal old encapsulated tumors, which should be left untouched.

If the diagnosis has caused any conflicts, such as a death-fright conflict or a self-devaluation conflict, these conflicts need to be addressed. In any case, there is never a reason to panic or to be scared of “metastasizing cancer cells”.

A new consciousness, it is the awareness that our organism possesses an inexhaustible creativity and remarkable self-healing capabilities, it is the recognition that each cell of our body is endowed with a biological wisdom we share with all living beings. In biological terms, a living organism is an inseparable Unity: of the Psyche, the Brain, and the Organ.

The Brain is the Main Computer of our Organism

All processes of the Psyche, and the Organ are coordinated from the Brain.

Essentially, the Brain is the main computer of our organism, and the Psyche the programmer.

Body and Psyche together are basically the "data receiver" of the computer brain (both in optimal programming mode and also when errors occur).

By no means is the Psyche the sole programmer of the Brain.

In cases of injuries the organ can also induce an automatic response in the Brain, and in the Psyche.

Acute-dramatic and isolative Conflict Shock that catches us completely off guard.

The Conflict Shock Occurs Simultaneously:

1. **In the Psyche**
2. **In the Brain**
3. **In the Corresponding Organ.**

The Medical Trade is unable to understand Cancer, and its contextual implications because they considered cancer to be incurable, and merely concentrated on eliminating the symptoms on an organ.

Nor is the Medical Trade able to understand the so-called "infectious diseases", because, instead of recognizing them as healing symptoms, we considered them as aggressive diseases with microbes out to destroy us.

When the functions of our organs were programmed into the different brain relays, the functions of microbes were also programmed into our computer brain. Microbes are all more or less specialists not only in terms of the organs they work on but also with regards to how they work.

The Body Heals Itself

In Over 90% of Cases: The Body Heals Itself.

If the patient has been made aware of all the facts, he will no longer need to get frightened by his symptoms.

He can now fully accept these as the healing symptoms they are; all of which had until now caused fear and panic.

In the greatest number of cases, the whole episode will pass without any serious consequences.

Being thus thrown back and forth between hope and panic is a most difficult situation for the patient and the cause for the very worst of complications.

Germ Layers

Embryology generally divides the development of the embryo into 3 so-called germ layers:

1. Endoderm (Inner germ layer)
2. Mesoderm (Middle germ layer)
3. Ectoderm (Outer germ layer)

Which develop already in the initial stages of embryo growth.

All organs derive from these 3 embryonic layers.

Every cell, and every organ of our body, can be ascribed to one of these germ layers.

By classifying all types of growths, swellings, and ulcers according to their germ layer correspondence we find that all "diseases" that relate to the same germ layer share special features (concerning the mesoderm we have to differentiate between the cerebellum-controlled and cerebral medulla-controlled mesoderm).

All cells and organs that derive from the inner germ layer have their brain relay or control center from which they are directed in the brainstem, the oldest part of the brain.

Histologically, and without exception, all Carcinoma are Adeno-Carcinomas, (Adenocarcinomas are a type of cancer that begins in glandular cells, which are found throughout the body and produce mucus, digestive juices, and other fluids).

All cells and organs that derive from the outer germ layer (ectoderm) have their control center in the cortex of the cerebrum, which is the youngest part of the brain.

Fear & Stress

Fear Causes Stress; that is Detrimental to Healing.

Fear Drains the Body of its Healing Energy.

Panic Triggers New Conflicts and Reactions in the Body; Which Hamper the Healing Process. A number of complications can arise during the healing and repair phase - both on the brain level and the organ level.

During the vagotonic stage, it is completely normal to feel tired and without energy for several weeks, or even, as in the case of hepatitis, for several months.

Surgery on a tumor is recommended if vital nerves, arteries or pathways of supply or elimination are affected, for example: When a Large Growth Obstructs the Colon; the Bile Ducts of the Liver, or the Trachea.

This occurs in 15-20% of these cancers and they are the only cases where a tumor may lead to complications.

Encapsulated tumors that could not be decomposed because of the absence of the necessary microbes might have to be removed surgically if they cause discomfort to the patient.

However, the surgeon should only remove as much tissue as is needed.

Since Cancers Do Not "Metastasize" (in muscle tissue), cutting deeply into healthy tissue is unnecessary.

No drug and no therapy in the world can truly cure a disease.

Only the patient can "treat" his symptoms, because only he can resolve his conflict and only he can do the healing!

Sedatives and Tranquilizers taken over a longer period of time, carry the risk of turning an active conflict into a hanging conflict.

They also drastically diminish the motivation and the energetic force necessary to resolve the conflict. Not at all recommended during this period are sympathicotonic agents, since they enhance and prolong the conflict-active symptoms, with potentially serious consequences for the patient.

An Individual Who Eats Properly Is Less Susceptible to Suffer Biological Conflicts." - Dr Ryke Geerd Hamer, MD, in "Writings & Lectures", 2005.

The Clinical Research Showing The Correlation Between a Diseased Organ and Its Brain Manifestation

Dr Ryke Geerd Hamer, MD, in 1959 passed his Medical State Examination in Marburg, and 2 years later, completed his residency, and was granted a professional license as Doctor of Medicine.

Dr Hamer, then specialized in Internal Medicine in 1972 at the University Clinics of Tubingen and Heidelberg.

In 1978 Dr Hamer, was studying, as an Oncologist, in a Cancer Research Clinic in Germany.

In August 1978, he received devastating news that his son (who had been shot, really traumatic), but his son wasn't dead, his son Dirk, was accidentally shot.

Dirk's battle before death lasted 4 months, **while his father watched him day and night.**

It became clear to Dr Hamer, (3 years later), that **this Life Event Had Created an Internal Shock, that Resulted in him the Development of a Testicular Carcinoma. Thus, he worked to understand his own disease, during this process he experienced a spontaneous remission of his cancer.**

This gave Dr Hamer, the understanding that the things he corrected within himself, during this process of personal growth influenced the cure his own cancer. After this personal incidents, Dr Hamer, MD (University of Tübingen in 1982), understood that Some Forms of Cancer; can arise from Emotional and Biological Shock (Dr Hamer "Cancer – The Mystery That Cannot Be Solved", 2001), **causing the individual to retract from the world with a destructive resignation regarding his fundamental wishes. This shock may go so deep that it can influence the whole biology of an individual organism, and it may steep deeper into existence than just the mind. Mental Shock can act as a trigger for disease (it is worthy of note that wild animals don't get metastases).**

This was named "Dirk Hamer Syndrome", and correlates how Traumatic Shock; may lead to a Biological Conflict, which may cause Disease in the Organism.

Strong Shocks create a physical reaction in the body, this effect can be detected by the study of images of the brain.

Explanatory models of cancer, must be linked to what we already know.

A Biological Conflict Manifests itself in the brain as a "Hamer Foci".

Dr Hamer method of making diagnoses, was to study Computed Tomography images (CT) of the patients brains, in order to locate the foci, and thereby, these can be used to make a correct diagnosis of where in the physical body an individual has developed cancer.

This Hamer Foci, appear as circles on CT images; which are similar to ripples in water. This circles, can only be shown on Computed Tomography images (CT), and not on Magnetic Resonance Images (MRI), nor on Positron Emission Tomography (PET).

Any:

1. **Physical Abnormalities, in any part of the body, is accompanied by a;**
2. **Manifestation in the Brain.**

It is the correlation between this 2 Biologic Events, that was the life long study by Dr Hamer, MD, of this Reflex Biological Phenomena, that Accompanies Disease.

The Establishment of Organic Disease in the body, is thus accompanied by a Biological Manifestation in the Brain.

These Biological Manifestations, can be seen by the use of Computed Tomography images (CT) Brain Scans.

Thus, the study of the Reflex Correlation (both in Health, and in Disease), between the Body Systems, and the Brain is of Paramount Importance, to the understanding of the full workings of the body.

And in particular, those in relation to the Unseen Forces; which are life-giving, which may be perceived, but are at present little understood.

For, Everything in the Body, is Designed, either to function in a:

1. **Bidirectional, or**
2. **Circular manner**

This Are Universal Principles; Applied to the Workings of the Physical Body.

Thus, within the Body Systems, we find Reflexes, and these are in principle endowed with the capacity; of being: Bidirectional in the Application of their Force or Impulses.

Life Is A Continuation

"I have got an inner belief, and an inner faith with God.

I do believe spiritually we have to progress, because we've been here before.

The Physical Body is just an overcoat for your Spirit.

At death, you take the overcoat off, and your spirit will go on to another life, in a spirit dimension. I think we make mistakes, when we are down here, and our Spirit has to come back and learn. That's why there is an injustice in the world. Why there's certain people born into the world, with terrible physical problems, and why there's a family who has got everything right: physically and mentally." - Glenn Hoddle, England Football Coach, in "Brian Alexander's Sportsweek", BBC Radio 5, 1998.

> ***"Pre-Natal Health Conditions, such as "Disability may, and could be Karma, or something of the individual's own choosing; from a previous life."*** *- in "My Life as a Healer", 1999.*

"My beliefs have evolved in the last years, that the Spirit, has to come back again. That is nothing new, that has been around for thousands of years. You have to come back; to learn and face some of the things you have done, good and bad. There are too many injustices around. You, and I have been physically given two hands, and two legs, and half-decent brains. Some people have not been born like that for a reason. The Karma is working, from another lifetime. It is not only people with disabilities. What you sow, you have to reap.

> ***"Be not deceived; God is not mocked: for whatsoever a man soweth, that shall he also reap. For he that soweth to his flesh shall of the flesh reap corruption; but he that soweth to the Spirit shall of the Spirit reap life everlasting. And let us not be weary in well doing: for in due season we shall reap, if we faint not."*** *- Galatians 6:7-9*

You have to look at things that happened in your life and ask why. It comes around." - in "Glenn Hoddle puts his faith in God and England", The Times, 30 January 1999.

"In order for you to understand Reincarnation, more easily I will have to touch into the subject of levels.

Many of you might remember that Jesus said:

> ***"There are many mansions in my father's kingdom."***

I have come to understand through my meditation, that there are 7 Mansions of light, but I prefer to call them levels. The next world we move into, when we lose our physical body, is on a different Dimension from ours, but it is still solid, Everything is Solid.

Have you ever asked yourself; why Jesus preached on the Mountainside, and not in the Synagogue?

The answer is simple: He had to stand on the mountainside because; He had to reach people from all religions, and all walks of life. It didn't matter to Him what religious they had. He needed to Teach Everybody God's laws, and His ways. We are all God's children.

He created each, and every one of us, and if you choose to take one religion, that is your decision. One of the stories in the Bible, I would like to look at, as I am talking about Reincarnation, is about the sins of the forefathers being visited on the sons.

> ***"The Lord passed by before him, and proclaimed, The Lord, The Lord God, merciful and gracious, longsuffering, and abundant in goodness and truth, Keeping mercy for thousands, forgiving iniquity and transgression and sin, and that will by no means clear the guilty; visiting the iniquity of the fathers upon the children, and upon the children's children, unto the third and to the fourth generation."*** *- Exodus 34:6-7*

> ***"The Lord is longsuffering, and of great mercy, forgiving iniquity and transgression, and by no means clearing the guilty, visiting the iniquity of the fathers upon the children unto the third and fourth generation."*** *- Numbers 14:18*

If you are suffering, then you are Probably Paying for Your Own, Sins in a Previous Life. We all have Free Will. That Is One thing that God Wanted Us To Have, and with that Free Will, We Can Choose how we live our lives. So, think about the consequences of your actions, because you will have to face them, whether it is in this life, or another incarnation. The Bible Is Full of Many Wonderful Teachings, and Stories, and I have always enjoyed reading it." - in "My Life as a Healer", 1999.

> ***"Man is: Spirit, Mind, Body; not separate entities but different phases of one constituent — Spirit." Therefore, logically, little understood as both of them are, mental, and physical disease are due to exactly the same causes; and respond to similar treatment."*** *- Dr Ulric Williams, MD, in "Hints on Healthy Living", 1934.*

> ***"This day, now, there is set before thee good and evil, life and death. Choose thou! Whom Ye Will Serve. Ye choose through the Will thy relationships; as to whether they shall be for self-exaltation, self-glorification, self-indulgence, self-gratification, or for the love of life, of truth, of hope, of honour, of virtue, of patience, of brotherly love. Ye yourselves show forth these in the manners, the ways ye deal with thy fellow man! Remember, ever, as ye do it unto the least of thy brethren ye do it to thy Maker. The law of the Lord is perfect, it converteth the soul. There is set before thee good and evil. That whom ye serve is the master, according to thine Own activity. Then, speak and act in His name; He that is the Saviour in the earth."*** *- in "Choose", The Book of Emmanuel or God among men.*

Past Life Memories And Emotional Trauma

"Numerous cases of young children, who report memories of previous lives have been studied over the last 50 years. The nightmares, and post-traumatic play experienced, are typical of the behaviours many of these children display, and demonstrate how difficult apparent past-life memories can be.

An understanding of the link between the apparent memories, and the emotional and behavioural issues, these children experience, may be helpful to families. Nightmares of plane crashing, on fire, and sinking, and being unable to get out:

> ***"Mama, before I was born, I was a pilot, and my air-plane got shot in the engine, and it crashed in the water, and that's how I died, in the Battle of Iwo Jima." - James, at 4 years old.***
>
> ***"I saw the hit. He was hit head on, right on the middle of the engine." - Veteran, who saw Huston's plane get hit***
>
> ***"I was shot down by the Japanese. Corsairs got flat tires when they landed." - James, at 4 years old.***
>
> ***"Corsairs bounced when they landed, leading to flat tires." - Air Force historian***

Awareness of cases such as James one; with documentation of a close agreement between events from a life in the past, and memories that a current child expresses, may lead the parents to be less likely to discount their children's reports, and more able to help them through the experience." - Dr Jim B. Tucker, MD, in **"The case of James Leininger"**, Explore, May–June 2016.

> ***"The memories themselves often began spontaneously, in late adolescence or early adulthood, around age 20 on average. They spanned from prehistoric times, to the 20th century, and across 23 different regions of the world. Most stories described ordinary, often difficult lives filled with hardship, not glamorous pasts. About half of participants (54%), also reported birthmarks or physical marks, they believed matched fatal wounds from previous lives. People who reported higher levels of spiritual practice, forgiveness, and positive religious coping strategies, tended to score better on happiness and mental health scales. In contrast, those who used negative religious coping, such as feeling abandoned by God, or believing their suffering was divine punishment, had worse mental health. Having a belief system to make sense of strange experiences may reduce distress."*** *- in "Past-Life Memories? Impact on Happiness and Mental Health", The International Journal for the Psychology of Religion, 9 July 2025.*

Reincarnation And Biology

"During visit to Sri Lanka 1961, I investigated the case of Wijeratne, who had a severe Birth Defect, said to derive from a Previous Life. A few months later, in Alaska; I studied the cases of Charles Porter and Henry Elkin. They had Birthmarks respectively related to a fatal stabbing with a spear and a gunshot wound. Despite this early introduction to the occurrence of birth defects and birthmarks, it took several years before I fully appreciated the importance of this type of case. Once I had this insight, I plan of collecting the reports of such cases into a large work.

The cases having birthmarks, and birth defects are important for 3 reasons:

1. The birthmarks, and birth defects provide an objective type of evidence, well above that which depends on the fallible memories of informants. We have photographs (and sketches), which show the birthmarks and birth defects. And for many of the cases, we have a medical document, usually a postmortem report, that gives us a written confirmation of the correspondence between the birthmark (or birth defect), and the wound on the person, whose life the child (when it can speak), claims to remember. Despite the obvious difficulties that the concept of reincarnation poses for Western thought in general and modern science in particular, the birthmarks, and birth defects in these cases do not lend themselves easily to explanations other than reincarnation.

2. The birthmarks, and birth defects derive importance from the evidence they provide that a deceased personality (having survived death), may influence the form of a later-born baby. I am well aware of the seriousness (as well as the importance), of such a claim, and can only say, that I have been led to it; by the evidence of the cases.

3. Perhaps most important, the cases with birthmarks, and birth defects provide a better explanation than any other now available, about why some persons have birth defects when most persons do not, and for: why some persons who have a birth defect, have theirs in a particular location, instead of elsewhere. We need to judge this claim against present knowledge of the causes of birth defects.

Even, taking account of the identified medical causes, modern medicine has nothing to say about, why a particular person has a birth defect, when another person does not. Indeed, modern medicine, with its reductionist and mechanical approach to illness, rarely recognizes a person as anything more than the behavioural expression of his or her body. From this perspective, there is no person other than the body. Thus, if someone is born with a birth defect, physicians nearly always attribute this to chance. The cases of this research work, suggest that for some birth defects, we can say why a person has a birth defect, and why the birth defect is in one location instead of in another. The next feature in the development of a case is often a dream, or dreams in which a deceased person appears, and expresses an intention to be reborn to particular parents. I call these announcing dreams. The dreamer is usually a woman who will be the mother of the baby in whose body the announcing deceased personality intends to reincarnate. Sometimes other members of the family, or even friends, may have announcing dreams." - Dr Ian Stevenson, MD, in "Where Reincarnation and Biology Intersect", 1997.

See Also: ***"Reincarnation and Biology: A Contribution to the Etiology of Birthmarks and Birth Defects", Vol. I and II, (2268 pages), 1997.***

All Healing Forces

For, All Healing Forces and influences are constructive; and are thus of the Divine influence. The Applications then, that may be made, Only assist in alleviating; through whatever manner of means may be used, these only assist in alleviating the distressed areas, and in adding to the system the influences that may; through constructive forces; materialize in active forces throughout the body.

All Healing Forces Must Be: Within; Not without!

The applications from without, are to create within a coordinating mental and spiritual force. Thus, it is important; to set the mind, to believe in Something, and let that be creative, and it must be of a spiritual nature. The individual then, must let the Meditative Forces (or Prayer be), when applying the correct Therapeutic Aids, each day. For being in the right attitude and grateful to the Lord is of the Utmost Importance, if Healing Is To Be Obtained.

This should be the Meditation by the Emunctologist, as there is the administering of the Magnetic Influences that should be administered to the body:

“Let thy inner self become more, and more aware of the peace, the harmony, the coordination, the cooperation of God's love, God's peace, God's harmony, in thy physical, and thy mental being; Now!

Healing Meditions

This should be given with those periods of Meditation, and the Magnetic Powers (by the hands, or electrical equipment); that go from body to body, as the superconscious, and subconscious forces possess or direct the material or physical forces through the activity of the spiritual reactions in body:

“The peace and the harmony that comes from the Father of light, and love, that is ours through the promises of the Christ in man, is possessing thy being, now, and making thee whole, as He would have thee; now! In His Name, in His Power, Be Thou Whole!”

In administering the power, or emanations from body to body in periods of Meditation or Prayer:

“Let the powers that may manifest from the holding of the consciousness of the Christ love in the earth now, quicken the spirit within thee, And Make Thee Whole; Now.”

Should Faith Healing be included in the Teachings of Emunctology?

Those who Should, Through faith, laying on of hands, anointing with oil, praying over same. There is, in the broader sense, that innate in each individual that may be awakened to those abilities in their activity, are they willing to attune themselves to the laws as pertain to the active forces in self's Own experience, keeping self unspotted and clean from the world, and Keeping that that brings according in the body that necessary for its awakening to its own spiritual activity.

Who shall do such?

Such as are called in their own experience. Knowing that as has been given, to some is given teaching, to others healing, to others ministry, to others on the various forces as are attributes of His love, His force, in a material world. One that is so given, then, let them Sanctify Their selves, Their bodies, Their minds, to his Fellow Man's service; for he that lendeth to the Lord covers a multitude of sins.

Why Emunctology Was Established

The Regents of the Hospitallers Order of the Good News, have Proposed:

The Creation of a New Field of Understanding in Clinical Therapeutics, in Resolving Disease, by the application of such, thus, Allowing the Body to Recover its Balance, Coordination, and thus achieving Health, without impediment or burden.

These Principles, here given, and the Therapeutic Measures here described, were first applied on self. Upon the Regents of the Hospitallers Order of the Good News, these applied to cure not only us: But Others.

The First Conditions Treated by Emunctology, which resulted in a Full Cure by the body, where:

1. Toxaemia.
2. Sciatica.
3. Pain in the Ear.
4. Arthritis.
5. Attention-Deficit/Hyperactivity Disorder.
6. Constipation.
7. Persistent Diarrhoea.
8. Cramps.
9. Headaches.
10. Polyps in the Uterus.
11. Oedema.
12. And all other conditions, so-called diseases.

Emunctology, is, and was established, with the aim to do good; to be of service to a suffering humanity; to the seeker of health. For All Healing Comes From God. So the Science of Emunctology is under God. For it is a gift from God, and thus it is an Undefeatable Science. That which has been given, that which has been explained, that which fills the pages of the Books “Emunctology: Principles and Foundations of the Emunctory System”, and “Emunctology Reference Manual”, these are the Foundations of Emunctology.

In the same manner, that Osteopathy is that which Dr Andrew Taylor Still, MD, DO, laid down in his Foundation Books, and Chiropractic is; that which Daniel David Palmer, and Dr Bartlett Joshua Palmer, DC, laid down, and explained in their books. The Foundation Books of Emunctology, of Osteopathy, and of Chiropractic, these are - to be exact - that which is enclosed in the founding books, which where first ever to be written, in their particular Clinical Therapeutic Method. All others publications, those that have followed, in the same subject; are but only the interpretation, and expansions of those notions, and those ideas, first given in the Founding Books.

Concerning the General Emunctology Council

The Hospitallers Order of the Good News, Is tasked, in setting, and sending out: The Tenets and Truths, especially as to the Relationships of Sanatoriums.

And, in the Teachings and Ministerings, to the Physical Needs of Individuals in Sanatoriums.

Thus, Emunctologists: Are Those Who Have Supervision Over the Combination of School and Sanatorium. This Combination Is Well, and should be a Part of the Training in Every Institution of Learning; not only the Hygiene and Economics, but the Combination of Preventative Health, Should be a Portion of Every Curriculum, in not only the Advanced, but the Beginnings of Institutions of Learning.

Concerning the General Emunctology Council: A Council Presided over by a Capable Individual, Well Balanced, First Spiritually; That's the First Element Necessary in the change for this Individual to Qualify for Such a Condition.

And to Possess the Material Knowledge as Regarding to:

1. **Physiology.**
2. **Anatomy.**
3. **Materia Medica.**
4. **Hygiene.**
5. **Dietetics.**
6. **The Mental Application; of all as respecting the individual.**

These are necessary qualifications of one heading the Council. Spiritually set, the individual capable of assisting, or directing such an institution.

The Emunctology Sanatoriums, are those places equipped sufficient to Care for those who might be in that position of having those conditions applied to their Physical, and Mental Bodies, for the Correction or Correlating of Same, so that Physically, Mentally, their bodies may be made-nearer whole, performing the functions for which it; The Body, has been given the experience in the earth's plane.

The Emunctology Sanatoriums, are always to be erected Near Large Bodies of Water, and with Pleasant Natural Surroundings.

The General Emunctology Council, is indeed; of the Benevolent Nature.

Has No Stock, Nor Dividends, Yet Charges for the Upkeep of the Sanatoriums, in the nominal way and manner, and there may be endowed such places, or rooms, by individuals or groups that would take care of those that are as the beginning of a more perfect understanding of the Relations Between the Spiritual, the Physical, and the Creative Energies, as Are Manifested in the Material World.

The Sanatoriums Function: WITHOUT, AND FREE FROM ANY DEPRAVED MEDICAL TRADE INFLUENCE, and are Only Staffed with many Practitioners of those other natures; (Hydropathy, Osteopathy, Chiropractic, Neuropathy, Electro-Therapy, Hyperbaric Oxygen Therapy, Materia Medica, Clinical Nutrition), as regarding the treatment of the bodily ills.

The First Necessary Qualification for the Emunctologist; is that of the Spiritual Attitude. It the Mental and Physical Attitudes are correct, the Abilities are correct. The right Spiritual Attitude can be obtained by Fasting and Prayer.

The Body Spiritually must gain the Proper Relations, as must exist between the Mental Body, the Physical Body, and the Spiritual Body.

The application of the one without the other is Not the whole body.

Hence in an Individual: There is the Spiritual Body, there is the Mental Body, there is the Physical Body.

To be a Physician of the Material Body, without a knowledge of the mental body, and the Ability to Apply the Spiritual Force, is Expended, just part of healer, and a healer for money!

Heal for that of: Making the Body One with the Whole.

Hence the Spiritual Insight that the body, the individual, may gain through that of Prayer and Fasting.

The body in a physical manner has those conditions that may be called defects physically. But defects and abnormalities are different conditions.

Defect May Be Made In Mental, a Defect in Physical, or a Defect in direction of Spiritual!

In the defects in the physical body, these are rather as Warnings for each individual, rather than that as of the conditions to be changed.

What ever these conditions may be! Yet, these may be changed.

They are direct conditions, the results of abuse of the physical body.

Learn, then, to Care for the Physical, for the Mental, for the Spiritual!

The Body, the Mind, the Individual (the Soul), has the Abilities (if it will) Apply Them!

As to what is to be done respecting health conditions, it would be well that all precautions known in the activity of he earth be taken (as particular attention to the activities of the body, and the Hygienic Influences in the experiences of the body) to avert an Adverse Influence in the Health of the Body Itself.

The question may be asked:

Why the Mental Hygiene?

Why the Physical Hygiene?

Because of those influences of the Mental Nature, that would cause the body to be attracted to the character of influences that would be detrimental to the physical welfare or sojourn in the earth during any particular period!

Consistency, with General Hygiene and the conduct of the body will bring relief. For Diet and Hygiene will have more to do with the System, Than Anything Else.

General Emunctology Council

"Educating Not Medicating"

Emunctology

Emunctology is the Clinical & Academic Research (Study & Understanding), on the Anatomy & Physiology of the Emunctory System (Elimination Systems of the Body), its Effect in the Cause of All Pathology, Mechanisms of Development (Pathogenesis), Structural Alterations of Cells (Morphologic Changes), and the Consequences of Changes (Clinical Manifestations) in Health. And the study on How to Resolve All Health Conditions, and to Teach on How Each Individual, Can Prevent Same!

Clinical Practice

Thus, the Clinical Practice of Emunctology, Consists First and Foremost, in the Useful and Correct Application of Hydropathy, in its main, and in its greater portion, and when indicated Neuropathy in its application of correctly given Osteopathic Manipulation, Chiropractic Adjustments, this in a Neuropathic manner, and where required Electric-Therapeutics should be given, and The Application in Complement (wherever the indication exists) of All Those Useful Therapeutic Measures (which are needed, in order to aid the body in resolving Dis-Ease), such as: Hyperbaric Oxygen Therapy, Electro-Therapy.

Registration of Practitioners

All Emunctologists are Registered with the General Emunctology Council, and all Emunctologists are members of the Hospitallers Order of the Good News.

All Emunctologists work in Clinics, and Sanitariums are owed and operated by the Sovereign Civil and Military Hospitallers Order of the Good News.

Please note that:

All Emunctologists are members of the Hospitallers Order of the Good News.

In order to Train or Qualify in Emunctology, one needs to be first a member of the Order. Emunctology Practitioners, Doctors of Health in Emunctology are not Osteopaths, Chiropractors, nor "Doctors of the Medical Trade."

Emunctologists don't practice Medical Trade so-called "Science".

Emunctology is not part of the Medical Trade.

Emunctology is concerned with Health not Disease!

Emunctologists are called Doctors of Health, not Doctors of Medicine.

Emunctologists don't drug, nor poison people.

Please Also Note That:

> ***"Experience has proven that those who have previously studied medicine, and afterwards tried to add Osteopathy, have been but a hindrance to the science. An allegiance to Drugs once established, is almost impossible to overcome. After careful consideration, therefore, it has been established that as a general rule no person shall be admitted as a student who has previously studied and practiced medicine.*** *It is desired to make successful operators of all who enter the school, and results have shown: The non-medical student far surpasses those who have studied medicine." - in "Journal of Osteopathy", Vol.1, No.1, May 1894.*

> ***"Various Theories and Explanations which are commonly adduced have been omitted, so that the student may approach the subject with an open mind, but with the assurance that all the movements described have been thoroughly tried and found useful. He will thus be in the advantageous position that he starts with no preconceived theories, and his mind will be unbiassed. In this manner we may ultimately arrive at the Truth."*** *- Dr Thomas Marlin, MD, MB, DPH, RCPS, DMRE, in "Manipulative Treatment", 1934.*

> ***"It's not an accident that they named the prison place that they send children to "School". And what they learn in there is: "How Not to Think!" And they've been at it for a long time, at least 150 years of Mandatory School, and they are very successful. People often talk about schools are failing. It's not true. It's just that their intention is to keep people thinking Illiterate, or what I like to call it: Scientifically Illiterate. So when you have a Scientifically Illiterate Population, led by Scientists and Medical Doctors who are equally Scientifically Illiterate, then this is what happens."*** *- Dr Tom Cowan, MD, in "Has a Virus Ever Actually Been Shown to Exist", UK Column, 16 May 2025.*

Synthetic Drugs

The Human Body is Not Designed to receive Synthetic Drugs.
It is both unnatural and unnecessary. And it is therefore detrimental to ones health, whereby the body needs to recover from a particular ailment, and then to recover from the Toxins and Poisonous Influences of Synthetic Drugs.

Synthetic Drugs are worse than a placebo, in 3 ways:

1. **It does Not Treat Root Cause of Disease.**
2. **Intoxicates the Body, thus Hindering the Recovery of the same.**
3. **Creates Addiction and or False Sense of Need, and Dependency.**

True Health Care it can never be about Intoxicating ones Body with Synthetic Drugs. The Human Body is a Perfect Machine.

It is designed and build to regenerate itself. Unless it is either deliberately or in-deliberately intoxicated or poisoned both physically and emotionally. It should function in a state of near perfection up to 150 years of good health.

The body like everything in Nature (belongs to and its part of Nature, and it is in Nature, not outside of Nature), receives Healing from the Eternal Force from where all healing come, The Creator. For it is in The Natural World that we find those elements that duly prepared, administrated or taken will aid those forces in the human body to rebalance it to a normal state both in vitality and strength.

> ***"We now come to actual Medicines, or Medicaments**, and find them described as: "That which has power to change the body, according to its quality, contrary to what we term nourishment which can be converted into the substance of the body." **The Power of the Medicine to change the body, depends on the nature of the body, and the circumstances, and the aphorism: "What is one man's meat, is another man's poison", holds good."** - in "The Mouth Mirror", March 1929.*

An Eminent Naturalist
Who Became a Great Physician

"The Impressions thus Made on the Boy's Mind During the Formative Period of his Life, his early adolescence, Were the Elements Out of Which the Mind of the Future Man Was Constructed. Dr Daniel Drake, MD was an eminent naturalist and became a great physician because of that fact.

He learned to love Nature early in life, and tried to understand the things which in the days of his childhood he had learnt to love. This is what made Drake a student of Nature, and gave him such power as a man of affairs in the building up of the great West. With a keen, and open eye, and a heart full of love for the beautiful things that abound in Nature's vast domain, coupled an inquiring mind that was not satisfied to wonder and marvel, but that approached the problems and mysteries of the air, the soil, and the water with a desire and a determination to solve the riddles, and to know the truth.

Thus we see how the foundation to Drake's subsequent career of greatness was laid.

Mussey experimented in various ways to prove that the Skin Does Absorb.

He immersed himself in a bath containing 1.35 kg of Madder (Rubia Tinctorum), and sufficient water to cover the entire body. For days following the urine showed the presence of Madder (red-rose colour).

He also proved that Rhubarb can be absorbed by and through the skin.

These experiments furnished the subject for his inaugural thesis.

In the Directory of 1829 an advertisement appears of Dr L. M. Johnson, who made a speciality of Galvanism as a remedy, and was equipped with the:

> ***"Medical Galvanic Battery where patients can receive this gentle and agreeable stimulus at all times."***

It was also provided with "a powerful Electro-Galvanic Resuscitating Battery which will be free for the Humane Society and the faculty for restoring suspended animation."

Dr Johnson also had discovered that medicines applied externally were "much more beneficial and more likely to subdue certain forms of disease than those administered internally, which most generally irritate, and do much mischief to the stomach and bowels before any specific action can be produced, and the manner of applying those medicines externally in the form of gas is certainly a discovery the most valuable in medicine." - Prof. Dr Otto Juettner, MD, in "Daniel Drake and his followers: Historical and Biographical Sketches", 1909.

> ***We are told by those who knew him, was a gentleman by nature and a Christian from convictions produced by a simple and unaffected study of the Word of God.*** *Daniel Drake graduated from the medical school of the University of Pennsylvania in 1807.* ***He mainly worked on the field of medicine, but also advocated social reforms and contributed to geology, botany, and meteorology, and medical geology.*** *Gert H. Brieger has called him "a heroic figure in American medicine" whose fame is due to his writings, where he also tried to improve medical education and scientific research. In 1827 Drake founded The Western Medical and Physical Journal. In 1828 he founded another journal, The Western Journal of the Medical and Physical Sciences.* ***A religious man, he was a founding Member of Christ Church in Cincinnati, and he advocated the combination of Christian feelings and literature. Sir William Osler, MD, was a great admirer of Drake.***

Vitamin D In The Treatment of Cancer

"Tumor Cells, along with a small proportion of Cancer stem cells, exist in a stromal microenvironment composed of blood vessels, cancer-associated fibroblasts, immune cells, and extracellular components. Recent clinical studies strongly support the idea that **Vitamin D Supplementation Is Associated with a Reduced Risk of Cancer, and a Favourable Prognosis.** Experimental results suggest that **Vitamin D, not only Suppresses Cancer Cells, but Also Regulates the Tumor Micro-environment to Facilitate Tumor Suppression.**

Growing evidence strongly supports the notion that **Vitamin D Deficiency Is Associated with an increased Risk of Cancer, and a poor prognosis.**

Vitamin D Supplementation may Exert Profound Cancer Suppression, particularly by targeting components of the Tumor Microenvironment." - in "Repurposing Vitamin D for the Treatment of human malignancies through targeting the Tumor Microenvironment", Acta Pharmaceutica Sinica B, 6 September 2018.

The Treatment of Disease by Hygienic Agencies

"Nature Materia Medica:

1. **Air**
2. **Light**
3. **Temperature**
4. **Electricity**
5. **Magnetism**
6. **Exercise**
7. **Rest**
8. **Food**
9. **Drink**
10. **Bathing**
11. **Sleep**
12. **Clothing**
13. **Mental influences**
14. **Mechanical or surgical appliances**

Truly remedial agents are materials and influences which have normal relations to the vital organs, and not drugs, or poisons, whose relations are abnormal and anti-vital.

The true Healing Art consists in supplying the living system with whatever of the above it can use under the circumstances, and not in the administration of poisons which it must resist or expel.

All healing power is inherent in the living System.

That the human body has the power to recover, under favourable circumstances, from most of the injuries that may be inflicted upon it." - Dr R. T. Trall, MD, in "The Hygienic System", 1872.

Chapter 2

The Science of Oneness

"The living man, with his interior consciousness of self and individuality is on two planes of nature at once, as a ship is in two media at once, half in the water and half in the air. To manage your ship successfully, you must take cognizance of the laws governing each of those media. To deal successfully with your human being, you must understand his physiology, no doubt, but you must equally understand his psychology, and something of the collateral phenomena of nature in those regions or planes to which the phenomena of the psychic man belong." - *A. P. Sinnett, in "The Rationale of Mesmerism", 1892.*

"All numbers are multiples of one, and all sciences converge to a common point, all wisdom comes out of one center, and the number of wisdom is one." - *Paracelsus*

"You should always remember, that the world or universe is one animated system, including one material substance and one spirit, and that all things have a reference to this one spirit, which pervades and actuates teh whole. You should reflect also, that all nature acts with a united force, and all things concur reciprocally in producing all things; and lastly, what connection and dependence subsists between them." - *Marcus Aurelius, Roman emperor (AD 121-180), in "Meditations", tr. Graves, 4.33, 1792.*

Oneness of Force, Oneness of Time

Oneness, Time, Space, Force, or the own individual is one with the Whole.

The physical world, and the cosmic world, or the astral world, are one.

For the consciousness, the sensuous consciousness, is as the growth from the sub-consciousness into the material world. The growth in the astral world is the growth, or the digesting and the building of that same oneness in the spirit, the conscious, the subconscious, the cosmic, or the astral world. We find, from one to another, individuals; individuals retained in that oneness, until each is made one in the Great Whole. As each and every atom in the Universe has its relative relation with every other atom, then man's development lies in the relativity of all forces, whether applied in the physical world as existent today, or that existence in man's earthly existence before, for The Relativity of One Force Applies to Another. Hence all relative forces apply to man's development, whether mental, physical or spiritual.

Oneness of God, oneness of man's relation, oneness of force, oneness of time, oneness of purpose, Oneness in every effort.

"I find as I look out on the world, in the light of all this new knowledge, a pressure of God upon consciousness everywhere; and if this physical force which is God, moves through, sustains, communes, with each smallest physical atom of the whole, much more must that conscious energy which is God, move through, sustain, commune with, these conscious atoms, these several monads, which are you and I, and our friend, and our brother far away. The even flow of the divine force through every material atom, which is the supreme revelation of physical science in our time, itself leads irresistibly on to the suggestion of the constant flow of spiritual energy in actual communion with every spiritual monad that there is. It becomes but a question of opening the eyes of the soul, unstopping the ears of the inward spirit, to see and hear the God who in us also surely lives and moves and has His being, thereby sustaining ours. As the physical atom is physically touched and held and thrilled by God, it is what we should expect that the conscious monad, no less should be consciously touched and held and thrilled by Him." - *Rev. R. A. Armstrong, in "Report of the Unitarian and other Christian Churches", Philadelphia, USA, 1889.*

"The Rev. J. J. Smith, M.A., D.D., tells us that the only way the great problem of the universe can ever be scientifically solved is by studying, and arriving at just conclusions with regard to, the true nature and character of force. He maintains, in his paper upon "The Unity and Origin of Force"; that, as it is the great organizer of matter, it must not only be superior to it, but also must have been prior, as it existed before organization commenced, and immanent always. Electricity is in principle as material as water. Newton, asserted that gravity must be caused by an agent acting, constantly, according to certain laws. Heat, gravity, light, electricity, magnetism, chemical affinities, are all different phases of the primal force discovered by Keely, and all these forces, it is said, can be obtained from a single ray of sunlight.

"The evidence of Unity or Oneness, even between the physical, vital, mental, and spiritual is seen in the light of this law of correlation." - J. J. Smith.

"A great portion of our muscles contract and relax in obedience to our wills, thereby proving that the mental force can be, and is, in every such instance actually converted into the muscular or the physical." Keely demonstrates the truth of this assertion, claiming that "all forces are indestructible, immaterial, and homogeneous entities, having their origin and unity in one great intelligent personal will force."

The Duke of Argyll says :

"We know nothing of the ultimate seat of force.

> ***Science, in the modern doctrine of conservation of energy, and the convertibility of forces, is already getting something like a firm hold of the idea that; all kinds of forces are but forms or manifestations of some one central force, issuing from some one fountain-head of power."***
>
> ***Professor George Bush writes: "It is equally indisputable that we are approximating the true philosophy which underlies the enlarged, and enlarging spiritual experiences and phenomena of the current age. This philosophy, when reached, will conduct us into the realm of the spiritual, as the true region of causes, and disclose new and unthought-of relations between the world of matter and of mind, is doubtless a very reasonable Anticipation"."*** *- in "Keely and His Discoveries Aerial Navigation", 1888.*

"Partly in accordance with Einstein's Unified Field Theory, which does exist and is alive and well, and is never in the status of being incomplete.

It was stated that way to the public, and was completed about 1938, and given to the government, and we had access to it at the Institute.

All of that says that; All of the elements of our universe, the energies which we normally consider:

1. Electric Field.
2. Magnetic Field.
3. Gravity Field.

Are all interrelated in such a manner that you have a 4th element, which is also locked in to them, and that is Time.

If you manipulate any 3 of those, you can affect the 4th.

In this case, the one we wanted to affect is Time.

So, if you know how to interact between the Electric Field, and the Magnetic Field, or the Gravity Field, you can affect Time. And that of course refers to a limited area in which you can affect those 3 fields.

Through what means?

Electromagnetic manipulations in terms also of certain mathematical constants which relate to the Earth's constants, and one of the main constants here on Earth which was used to generate and to predict window frequencies, or certain phenomena as a mathematical function of Pi over 2.

That is one of the keys, one here if Pi, if you will, and multiples thereof. I won't go into this as a long mathematical dissertation, but basically any frequency involved which is Pi over 2 is active in a special sense.

What they were doing was generating an electric field through the means of a radio transmitter which generates an enormous electric field from an antenna depending on the power level." - Al Bielek, in "Philadelphia Experiment", Coast to Coast AM with Art Bell, 20 June 1993.

There is no Time in Spirit.

"- Life on this planet is the result of some sort of accident, or it is part of some great scheme?

Sir James H. Jeans - I incline to the idealistic theory that consciousness is fundamental, and that the material universe is derivative from consciousness, not consciousness from the material universe. If this is so, then it would appear to follow that there is a general scheme. In general the universe seems to me to be nearer to a great thought than to a great machine. It may well be, it seems to me, that each individual consciousness ought to be compared to a brain-cell in a universal mind." - Sir James Jeans, British Astronomical Physicist, in "Observer", 4 January 1931.

> ***"The Universe begins to look more like a great thought, than like a great machine. Mind no longer appears to be an accidental intruder into the realm of matter. We ought rather hail it as the creator and governor of the realm of matter."*** *- Sir James Jeans, British Astronomical Physicist, in "The Mysterious Universe", 1944.*

3 Perceived Forces Are Single Unified Force

"The basic idea of a grand unified theory is that what are perceived to be 3 independent forces (the strong, the weak and the electromagnetic), are actually components of a single unified force. In the theory each component of the force is related to the others by an underlying symmetry, so that all the components are described by a single force law. The same symmetry implies that, at the fundamental level, there is no distinction between electrons, the weakly interacting massless particles known as neutrinos and the quarks, which bind strongly together to make up protons and neutrons. Experimentally, on the other hand, electrons, neutrinos and quarks behave very differently, and the strong, weak and electromagnetic forces are very different in both strength and character. Thus, the theory is constructed so that the symmetry is "spontaneously broken" in the present universe. Grand unified theories were not the first to make use of spontaneous symmetry breaking - the mechanism had previously been used in the unified electroweak theory." - Paul Davies, Theoretical Physicist, in "The New Physics", 1989.

Science and Religion are One, When Their Purposes are One

Do not doubt the abilities of those influences in the spiritual life to meet the needs of the body physically, mentally, spiritually. Man's development, is of man's understanding and applying the laws of the Universe, and as man applies those, man develops, man brings up the whole generation of man. Individuals carry out certain elements and laws, and gradually man becomes capable of applying and using those in the everyday life of man. This, whether applied in medical science, anatomical science, mechanical science, or any science, is merely the development, or the application as man applies to Universal laws as are ever, and have ever been, existent in the Universe. As is in this: that producing electrical units of force, is just as applicable to the Universal forces in the days of Adam as in the days of the Master, or as in the days of today. Those laws applying to aerial of transmission just as applicable in one as in other. Man not understanding those. Many times has the evolution of the earth reached the stage of development as it has today and then sank again, to rise again in the next development. Some along one line, some along others, for often we find the higher branches of so-called learning destroys itself in the seed it produces in man's development, as we have in medical forces, as we have astrological forces, as we have in some forms of spiritual forces, as we have in forms of destructive forces of the various natures.

> ***"When man attains freedom by giving up self-will, and selfish desires — or, to express it in other words, when by means of the Christ (eternal Light and Truth), he arrives at that state of oneness (at-one-ment) with God, which renders his soul godlike and divine, he then also receives in the Christ a true and essential knowledge of God and of Nature. As soon as the newly-regenerated man becomes manifest, will he attain real knowledge. As the external man sees the external world, likewise the regenerated man sees the divine world wherein he dwells."*** *- in "Life and Doctrines of Jacob Boehme", 1891.*

> ***"The day science begins to study non-physical phenomena, it will make more progress in one decade than in all the previous centuries of its existence."*** *- Nikola Tesla, in "Dr. Nikola Tesla bibliography", 1979.*

As to occult or psychic science, as called, then - it is, as we have found through some manifestations, that these forces are first recognized in or by the individual. Hence, as has been seen, in the beginning these were the natural expressions of an entity. As there developed more of the individual association with material conditions, and they partook of same in such a manner as to become wholly or in part a portion Of same, farther - or more hidden, more unseen - has become occult or psychic manifestations.

First there were the occasional harking back. Later by dream. Again we find individuals raised in certain sections for specific purposes. As the cycle has gone about, time and again has there arisen in the earth those that Manifested these forces in a more magnificent, more beneficent, way and manner. And, as has been given, again the time draws near when there shall be seen and known among men, in many places, the manifestations of such forces in the material world; for: "As ye have seen him go, so will He return again."

Be thou faithful unto those words He has given while yet with you. Hence it behoves every individual to take cognizance of that force that may manifest in their material lives, even in this material age; for those that become ashamed for His sake - for That sake - of that that may manifest (which is as the Spirit's manner of activity) through those many channels that are open to those who will look up, lift up - and these, we find, are often in the lowliest of places and circumstances. Even as in those first experiences with the use of those powers that are so tabu by the worldly-wise, that are looked upon as old men's tales and women's fables; yet in the strength of such forces do Worlds come into being!

This is what Psychic Force, and So Called "occult science", Did mean, Has meant, Does mean in the world today. There were those individuals that attempted to bring again to the mind of man more of those forces that are manifest by the closer association of the mental and spiritual, or the soul forces that were more and more as individual and personal forms in the world, the use of the these elements; as for the building up, or the passage of individuals through space; brought the uses of the gases then (in the existent forces), and the individuals being able to become the elements, and elementals themselves, added to that used in the form of what is at present known as the raising of the powers from the sun itself, to the ray that makes for disintegration of the atom, in the gaseous forces formed.

> ***"What we have found in our laboratory is that the energy of mind projected through a crystal will structure water just like it was frozen into ice. The remarkable, and unique differentiation is that, water, when it is structured with mind, and with thought, remains fluid. But structured, that type of category is called a liquid crystal, a mesophase, a mesomorphic transition."*** *– Marcel Vogel, lecturing upon the structuring of water.*

Experiments with Alternate Currents of High Potential and High Frequency

"But there is an additional feature of interest about this motor, namely, **it is not necessary to have even a single connection between the motor and generator**, except, perhaps, through the ground; for not only is an insulated plate capable of giving off energy into space, but it likewise capable of deriving it from an alternating electrostatic field, though in the latter case the available energy is much smaller. In this instance one of the motor terminals is connected to the insulated plate or body located within the alternating electrostatic field, and the other terminal preferably to the ground. It is quite possible, however, that such "no-wire" motors, as they might be called, could be operated by conduction through the rarefied air at considerable distances. Alternate currents, especially of high frequencies, pass with astonishing freedom through even slightly rarefied gases.

The upper strata of the air are rarefied. To reach a number of miles out into space requires the overcoming of difficulties of a merely mechanical nature.

There is no doubt that with the enormous potentials obtainable by the use of high frequencies and oil insulation, luminous discharges might be passed through many miles of rarefied air, and that, by **thus directing the energy of many hundreds or thousands of horse-power, motors or lamps might be operated at considerable distances from stationary sources.**

But such schemes are mentioned merely as possibilities.

We shall have no need to transmit power at all. Ere many generations pass, our machinery will be driven by a power obtainable at any point of the universe. This idea is not novel. Men have been led to it long ago by instinct or reason; it has been expressed in many ways, and in many places, in the history of old and new. We find it in the delightful Myth of Antaeus, who derives power from the earth; we find it among the subtle speculations of one of your splendid mathematicians and in many hints and statements of thinkers of the present time.

Throughout Space There Is Energy

Is this energy Static or Kinetic? If static our hopes are in vain; if Kinetic; and this we know it is, for certain; then it is a mere question of time When Men Will Succeed in Attaching Their Machinery to the Very Wheel-Work of Nature. The desire that guides me in all I do is the desire to harness the forces of nature to the service of mankind. Everything in the universe resonates at it's own frequency, yet they all relate on a harmonic scale to each other. Understanding my work means understanding the key to the universe, resonance. Our senses enable us to perceive only a minute portion of the outside world. Though free to think and act, we are held together, like the stars in the firmament, with ties inseparable. These ties cannot be seen, but we can feel them. The gift of mental power comes from God, Divine Being, and if we concentrate our minds on that truth, we become in tune with this great power. All that was great in the past was ridiculed, condemned, combated, suppressed: only to emerge all the more powerfully, all the more triumphantly from the struggle." - Nikola Tesla, in "Institution of Electrical Engineers", London, 1892.

This Will End Shortages of Food, Raw Material, Germinating Substances & Fuels Instead of Capitalism & Bolshevism: A True Socialism Will Arise: About Which Christ Preached 2,000 Years Ago; And Taught of Transformation of Matter Into Spirit

"To put it briefly and simply: We have been taught to wind up the ur-works like a clock, i.e. axially->radially.

However, the ur-works that maintain the clock-springs of hunger and love in constant motion must be wound up radially->axially, because only thus is it possible to enable the suctional components to prevail, which produce levitism = upwardly streaming magnetism.

In reality, for the last 2000 years the opposite has happened.

Only the Catholic Church, even if merely symbolically, has indicated the naturalesque way to transform matter into spirit.

On the other hand, in all areas of the economy and industry secular science instructed and taught the opposite "winding".

Therefore, **in lieu of the evolution-fostering (ennobling) spirit, it raised and reinforced the demon in the form of development-impeding electricism, as if by conveyor belt, to such an extent that the magnetism-generating Earth, which moves in cycloid-spiral-space-curves, is now incapable of neutralising the decomposive energies and their effects produced by millions upon millions of human beings.**

It was therefore inevitable that we should be assailed by the catastrophes of Nature that we are presently experiencing.

They are exactly the opposite of those experienced by the Atlanteans, who realised the danger of over-stimulating formative and levitative energies, only when whole sections of the Earth were wrenched skywards by these elemental (metaphysical) suctional forces.

All today's machines, all methods of conveyance and the production of light and heat enable the lower-grade heat-, light- and temperature-producing pressured components to prevail and predominate.

Since no heat or kinetic equivalence exist, but only the reactive intensification of development-fostering or development-impeding energies, an economic, social, moral and cultural decline had to take place as the scope of pressure-inducing machines and other such devices increased and intensified.

Accordingly we have to learn the lesson from both extremes and balance out both forms of motion and acceleration in such a way that in accordance with the well-known equation F=ma, the desired force F in the form of a predominantly magnetic ion constantly possesses enough levitational superiority to ensure that natural increase and qualitative improvement can keep pace with the unavoidable increase in the population.

That is to say, the standard of living must be regulated through the use of higher-grade (quality-increasing) retro-influent dynagens, which come into being when bipolar threshold masses are centripetated in accordance with the equation E=mc2.

In other words, when they are accelerated by radially->axially in-winding forces to a speed exceeding that of sound under the simultaneous effect of a falling temperature gradient, i.e. accelerated along the longitudinal axis above their boundary velocities.

This gives rise to the higher-grade factors of temperature, light and energy out of which upwardly streaming magnetism springs forth from the spiritual embryos, the vitamin-molecules mentioned at the beginning.

These are suspended in a delicately balanced state of equilibrium in the media of air and water and await the naturalesque motive impulse in order, as refined subtle matter, to transform themselves into formative, multiplying and ennobling retro-influent energies.

This will signify the end of the present shortages of food, raw material, germinating substances and fuels, and instead of capitalism and bolshevism a true socialism will arise about which Christ preached 2,000 years ago, who taught of the transformation of matter into spirit with the aid of the above form of motion.” - Viktor Schauberger, in “The Energy Evolution”, 2000.

> ***“The whole Evolutionary process, both Cosmic and Organic, Is One, and the biologist may now rightly regard the Universe in its very essence as biocentric.”*** *- Professor Lawrence Joseph Henderson, Harvard University.*

> ***“We cannot be suppressing one part of the science; because it does not agree the dogmas.”*** *- Dr Luc Montagnier, MD, Nobel Prize in Physiology or Medicine 2008, in “El Diario Vasco”, 10 May 2016.*

“The existence of a highly compressed layer of hydrogen atoms over the surface of solids would explain the very interesting fact that H3 is produced so much more readily by bombarding solids than in any other way, for on the surface of these solids we have the atoms in an ideal condition for combination, packed so close together that they are almost in contact, and at the same time ionized and liberated by the action of cathode rays.

Though we cannot expect to get rid of layers of hydrogen atoms by heat treatment we may expect to be able to do so by long-continued bombardment with cathode rays; the maintenance of the vacuum in a Coolridge tube in constant use is a proof that this is the case. Though we ought in this way to be able to eliminate the hydrogen from the walls of the tube, yet I have never yet been able to eliminate the lines corresponding to the atom and molecule of hydrogen from the positive ray photographs.

This is usually ascribed to the hydrocarbon vapours given off by wax used to join up the glass bulb to the metal parts of the apparatus or to the grease used to lubricate the taps.

No doubt each of these is a source of vapours containing hydrogen, but I am not satisfied that it is the only source.

I have replaced the wax joint by one in which a layer of copper deposited on the glass was soldered to the metal, and liquid air traps were placed between all the taps and the bulb: even with these precautions the hydrogen lines were quite bright on the photographs." - in "Rays of Positive Electricity and Their Application to Chemical Analyses", 1921.

To Understand a Multi-Dimensional Universe, what would be the Dimensions we are unaware of?

Any Dimension higher than the 3, that we're familiar with, or the actual 4 that we're embedded in.

We live in a 4-Dimensional world.

You have never met someone at a place, unless it was also at a time, and you have never met someone at a time, unless it was also at a place.

That requires 4 Dimensions of a portal.

We need 4 Dimensions, to localize someone, to meet up with them.

Only 2 Dimensions if you don't have tall buildings, if you have tall buildings you need the 3rd Dimension.

Thus, you don't say, I'll meet you at the 10th floor of 7 Golden Avenue.

At what time?

There's a full 4 Dimensions, going on there, so we live in a 4-Dimensional world.

It may be, that these 4 Dimensions are manifest to us, but that in fact; we are embedded in a higher dimensional space.

Strength theorists, on the frontier of this exercise, are hypothesizing at least the existence of 10 Dimensions, to account for everything we see in the universe, even if we do not directly measure those dimensions.

> ***"The science before its incapacity, before the mystery that it has and it does not see, does not reflect that if nothing sees, it must not deny as it does, everything inexplicable, the illogical, which according to her cannot be, because she has in her Hands the Truth. The Petulant science says: "This is" or "this is not", she is unappealable, and to every question mark she smiles in mischief, becoming a permanent inquisitor, while the world advances in events that she calls them unusual insanity proper of ignorants or alcoholised. Science will know one day, that everything is natural and is true in the way of reality and unreality, tangible to many who know that we are all part of something that although it is not felt, exists. Science will know one day."*** *- Benjamín Solari Parravicini*

One Source of Energy

"Our senses enable us to perceive only a minute portion of the outside world. ***If you want to find the secrets of the universe, think in terms of Energy, Frequency and Vibration."*** *- Nikola Tesla, in "The Transmission of Electrical Energy Without Wires As a Means for Furthering Peace", 7 January 1905.*

All Matter Comes From A Primary Substance: The Luminiferous Ether

"Long ago man recognized that all perceptible matter comes from a primary substance, of a tenuity beyond conception, filling all space, the Akasha or Luminiferous Ether, which is acted upon by the life-giving prana or creative force, calling into existence, in never-ending cycles, all things and phenomena. The primary substance, thrown into infinitesimal whirls of prodigious velocity, becomes gross matter; the force subsiding, the motion ceases and matter disappears, reverting to the primary substance." *- Nikola Tesla, in "The Psychic Observer", 10 April 1945.*

Energy, Frequency And Vibration

The Different Forms:

1. **Light.**
2. **Sound.**
3. **Heat.**
4. **Magnetism.**
5. **Colour.**
6. **Electrical Energies.**

These Are "All Different Forms of ONE Source of Energy"; They Differ Only in "Frequency of Vibration", and "Medium of Conduction."

As for Colours Pertain to Life itself.

Tone And Harmony

1. Tone And Music Is Colour.

2. Colour Is Vibration.

3. Vibration Is Movement.

4. Movement Is Activity of a:
+ Positive Force.
or
- Negative Force.

Chiropractic Founded On Tone

"The Chiropractor Adjuster: To all, who long to elevate the human race by freeing it from ignorance, traditional prejudice, superstition, and the pernicious delusions of the "Superiority of Drug Medication", and the "Necessity of Surgical Mutilation", and especially to those who desire to know the best method of removing the unnatural and unnecessary condition called "disease—conditions" which, not only cause great suffering, shorten life, and lessen natural and intellectual progress, but prevent that proper acquirement of Metaphysical Knowledge, so necessary for The Next Stage of Existence, this book is most earnestly dedicated.

Life Is The Expression of Tone

In That Sentence; Is The Basic Principle of Chiropractic.

Tone is the normal degree of nerve tension.

Tone is expressed in functions by normal elasticity, activity, strength and excitability of the various organs, as observed in a state of health. Consequently, the cause of disease is any variation of Tone; nerves too tense or too slack.

The Science (knowledge), and Art (Adjusting) of Chiropractic, were formed at that time, I began a systematic investigation for the cause of all diseases, and have been amply rewarded. I founded Chiropractic, on Osteology, Neurology, and Functions; bones, nerves and the manifestations of impulses.

I originated the Art of Adjusting vertebrae, and the knowledge of every principle which is included in the construction of the Science of Chiropractic.

The amount of nerve tension, determines health or disease.

In health there is normal tension, known as Tone, the normal activity, strength and excitability of the various organs and functions as observed in a state of health.

The kind of disease depends upon what nerves are too tense, or too slack.

Functions performed in a normal manner and amount result in health.

Diseases are conditions resulting from either; an excess or deficiency of functionating. The dualistic system: Spirit and Body; united by intellectual life - the soul -, is the basis of this Science of Biology, and nerve tension is the basis of functional activity in health and disease.

Spirit, Soul and Body; compose the being, the source of mentality.

Innate and Educated, two mentalities, look after the welfare of the body physically, and its surrounding environments.

Chiropractors correct abnormalities of the intellect, as well as those of the body. These discoveries and their development into a well-defined science, are worth more to the student, practitioner and those desiring health." - D.D. Palmer, in "Chiropractic for Students and Practitioners", Founded on Tone, 1910.

Man Is A Living Dynamo

"The composition and structure of the Universe, on the one hand, and that of Man on the other, represent but two aspects of a common Biological Law.

Light, Life and Matter are the 3 fundamental principles through which that universal law, comes into manifestation, and governs all the phenomena occurring in nature. The biological motion of nature is basically heliocentric (Sun Light). Physical life in its final analysis is by some described as a bio-chemical process. But we find that behind all the visible processes which can be produced and analysed in the laboratory; there is still another constant, although invisible activity, which directs the visible exchange of matter and controls the morphological equilibrium of an organism.

This Invisible Energy is Present in a relatively Steady State in Every single Particle of a Physical Body, converting every speck of matter into a centre of force, and a whirl of motion, forming thus a transitory web of radio-active substance which serves as a bridge for sensations, and a Link for Communication Between Tangible and Tenuous States of Matter.

The human body, in its final analysis, is also known to be made up of the same elements as the whole of creation, and if man were sufficiently magnified he would be found to consist of a mass of luminous whorling particles held together in a state of tension. Exhibiting the phenomena of attraction and repulsion, of cohesion and separation, expressing the energy of that particular body in terms of Life.

Light and Life Are So Closely Connected That One Cannot Exist Without The Other.

For Example: It is already a well-known fact that radiations similar to those of light are constantly given off by the body in the form of minute electrical discharges which surround the body with an electro-magnetic field of force or "Aura", not only perceived by sensitive people, but which has been measured by scientists, and is known to extend to a distance of several feet or even yards around the body.

Every single cell of our body, contains within its walls a definite and constant quantity and quality of radio-active energy, projecting and receiving electro-magnetic vibrations of varying frequency and intensity.

According to their quality, vibrations travel to various distances, the distance travelled representing a "mean free path of motion", along which any selected impulse can be propagated and transmitted to, and from, one body to another.

This mean, free path of motion, is the chief and basic contact line which can be scientifically determined and utilized for the transmission and reception of vibratory impulses, independently of distance or time, provided the individual is tuned up to the correct frequency. Man Is A Living Dynamo, and the human body is the most sensitive and perfect instrument of all creation. The close relationship which exists between electro-magnetic phenomena, vibration in general, and human vibrations, is more easily appreciated when either are converted into sound, as any of them may be by any instrument capable of registering and emitting sound. To preserve or restore health it is essential to maintain a harmonious distribution and exchange of electromagnetic vibrations within the organism. Whether the cause of a disease is considered to be primarily mental, psychological or physical, it is secondary to the fact that ill-health is always the proof of a vibratory disturbance in the organism which can be readjusted by Light, whether in the form of Diet, Sunlight or any of its reproductions which will produce a perfect Chromo-Static Synchronization.

Spectro-Biology is therefore fundamentally the study of Cosmic Geometry through the agency of Light with the object of establishing infallible evidences of the relation existing between Light and Matter, which alone can lead us to understand the intricate part played by Solar Radiations in the evolutionary process of life." - Countess Maryla de Chrapowicki, D.Psy., in "Spectro-Biology", Journal of the International Institute for Psychic Investigation, April 1940.

> ***"Musical Sound had a highly statistically significant effect on the number of seeds sprouted compared to the untreated control over all 5 experiments for the main condition and over time. This effect was independent of temperature, seed type, position in room, specific petri dish, and person doing the scoring. Musical Sound had a significant effect compared to noise and an untreated control as a function of time while there was no significant difference between seeds exposed to noise and an untreated control. Healing Energy also had a Significant Effect compared to an untreated control and over time with a Magnitude of Effect Comparable to that of Musical Sound. Conclusion; This study suggests that Sound Vibrations (Music and noise) as well as Biofields (Bioelectromagnetic and Healing Intention), Both Directly Affect Living Biologic Systems, Seed Germination Bioassay, has the sensitivity to enable detection of Effects caused by Various Applied Energetic Conditions."*** *- in "Measuring Effects of Music, noise, and Healing Energy using a Seed Germination Bioassay", Journal of Alternantive Complementary Medicine, February 2004.*

Luxations Are Caused by Direct Traumatism, Poisons or Auto-Suggestion

"The writer is attempting to awaken interest in the teachings of D. D. Palmer who wrote:

> ***"The Determining Causes of Disease Are Traumatism, Poison and Auto-Suggestion. These Luxations are Caused by direct Traumatism, Poisons, or Auto-Suggestion."***

There are numerous other references by D. D. Palmer, to the importance of the mind as a causative factor in the production of subluxations, and generalized vertebral distortion.

Many Chiropractics have failed to appreciate the depth of insight, and did not emphasize this causative area.

Of late, the Chiropractic profession has been taking an interest in courses which stress the spiritual and mental approach to the problems of disease.

And the mechanism by which the emotional stress manifests itself in somatic disturbances, or disease, through the distress of function of the vertebral column, known as subluxation.

It is of the utmost concern to awaken an appreciation in the minds of doctors of Chiropractic, for the heritage left by D. D. Palmer, which provides the basis for the most **complete understanding of the patient as a unit of structure and function.**

Nor is this to be assumed to indicate a concurrence with the total writings of the founder of this profession.

These fundamental principles, supplied by D. D. Palmer, provide a skeleton for the biological facts which make scientific Chiropractic one of the most comprehensive schools yet devised. The Chiropractor needs to experience no twinge of inferiority as he views the mottled array of theories.

The founder of the science of Chiropractic appreciated the working of Universal Intelligence (God); the function of Innate Intelligence (Soul, Spirit or Spark of Life) within each, which he recognized as a minute segment of Universal; and the fundamental causes of interference to the planned expression of that Innate Intelligence in the form of Mental, Chemical and or Mechanical Stresses, which create the structural distortions that interfere with nerve supply and thereby result in altered function to the point of demonstrable cellular changes, known as pathology.

The above paragraph was quoted by the committee under Health, Education, and Welfare Secretary Cohen in its effort to derogate Chiropractic, but in no instance was any ability demonstrated to understand the neurological mechanisms explained in later chapters to justify this statement of fact.

Had attention been directed to the writings of Kervran the gentlemen of the committee might have avoided mindset on the fallacy that allopathic medicine has all, and the only answers to the restoration of health, for he states:

> ***"All laws of classical physics have been deduced from experiments made on dead matter. The principle of divergence — of elastic waves, acoustic, luminous, or material: all the physical waves of the inert — is not applicable to biology. The greatest men of science now recognize that neither the chemistry nor the physics of inert matter is integrally applicable to living matter.*** *Szent-Gyorgyi, who was awarded the Nobel Prize, expressed this point quite well in his disagreement with the physicists of yesteryear: "This makes the relationship between the physicist and the biologist rather delicate... If I had always accepted the physicist's verdict, I would have abandoned this way of research. I am glad that I did not do it."* ***He arrived at the conclusion that molecular biochemistry is not enough to make us understand what happens in living matter, that one should take a step down in the structure and study the atom, because it is at the sub-atomic level that the unknown is being produced. Otherwise "physics is the science of probabilities... biology the science of the improbable."*** *(Szent-Gyorgyi, Introduction to a Submolecular Biology, 1960) The improbable surely happens, because quantum mechanics proceeds only on the basis of statistics. But in biology things are different. An electron makes a sure jump and one only; it never misses the target. (This explains the small amount of energy necessary.) Why? This fact brought Szent-Gyorgyi to write: "Even quantum mechanics should be improved in order to be applicable in the analysis of most problems in biology." We are hanging in the air!"* - **Professor Louis C. Kervran, Scientist, proposed that nuclear transmutation occurs in living organisms called "biological transmutation",** *in "Biological Transmutation", Phoenix Journal, No.149, 1995.*

While the phenomena of life, and functions of living matter have been unravelled to a very marked degree by scientists working with lavish expenditures of tax dollars, there remains much that is yet inexplicable, as Kervran stated:

> ***"It will be widely demonstrated that there are other biological phenomena unexplainable by the movements of the electrons — that is, by chemistry or physico-chemistry — because of a frequent incompatibility between biology and these sciences".***

Recognizing the multiform stress of environment upon the total human structure, the Chiropractic seeks to normalize the neurological and anatomical responses to such disease-producing factors, recognizing that in instances other branches of Therapeutics may be required for specialized skill and knowledge.

The total patient and his welfare should be the first concern of any would-be physician.

As Dr C. A. Pinkenburg pointed out, Dr Thomas Sydenham called **"the healing powers of nature"**; Haller named it **"Vital Force"**; Dr A. T. Still, referred to this healing and regulating phenomenon of the body as **"Divine Essence"**; D. D. Palmer coined the phrase **"Innate Intelligence"** to express this manifestation for which the best minds of this enlightened age have no explanation, although much has been learned about the mechanisms of the body since D. D. Palmer's day and Innate Intelligence has been pushed into a smaller area.

The day may come when scientists have unravelled all of the mysteries of the human body and there will be no need for terms such as Innate Intelligence, Ego, Libido, Homeostasis, etc., to hide ignorance.

The adjusting of each, and every articulation of the human frame was stressed by Dr Palmer in a number of places in his text, as follows:

> ***"It is, or should be, the business of the Chiropractor to restore to normal position any displaced portion of the bony framework."***

What more could any doctor require of his science? What more has science, metaphysics, or religion to offer the conscientious would-be healer?

The failure to appreciate the teachings of D. D. Palmer has created many fallacies, deficiencies, partial truths, discontent, bickering and, above all, feelings of inferiority within the ranks of the profession. **Are turn to the basic principles, as enunciated by the founder, would remedy many of the problems.**

A structural problem, brought about by a mechanical or chemical cause, may so disturb the mental balance of the individual that he is no longer capable of coping with the emotional stresses of his environment.

Dr Herman S. Swartz discussed an essential phase of this disturbing relationship of the subluxation to the Psyche in his article:

> ***"The art of restoring disrelated skeletal and / or muscular tissue to its normal design is psychosomatic, per se, because it corrects and removes the faulty structure or subluxations responsible for the nerve irritations affecting a particular Organ or Gland. Every nerve infringement within the vertebral column is an incipient pathological state involving some concurrent psychic infringement. This initial "malformation" may readily lead to a true psychosomatic condition if the patient centrally superimposes upon this localized neural irritation evoking specific regional pain the additional generalized or widely distributed weight of fear in any one of its protean forms. Thus increased by a remoter reinforcement from another power area or energy source, the pain is necessarily paralleled by a corresponding growth in fear, worry, and anxiety, and the slow nibbling away of the sufferer's psyche goes on apace. In this fashion, a minor subluxation can turn into a full-flowered psychic upset if the patient uses his unalleviated discomfort:***
>
> ***1. To escape reality;***
> ***2. To avoid his obligations to himself and others;***
> ***3. To "get even" with some superior, associate, or family member;***
> ***4. To interpret his pain as divine punishment for some offense, etc.***

> ***If, as is so commonly the case when sedatives are administered, the pain is deadened by medication, then the mental faculties are benumbed in some degree with the further result that temporary personality deterioration ensues, normal confidence and poise are destroyed, and childhood fears, frustrations, and feelings of guilt and rejection become prominent to such an extent that the initially uncomplicated "winding base" goes unrecognized by both doctor and patient. In this way a simple fall, blow,or other injury eliciting some anatomical distortion can grow into a full-bodied neurosis or psychosis. Conversely, correcting the distortion brings relief, recovery, and cure in enough cases to demonstrate that chiropractic, per se, is beneficial to the mentally disturbed, whether used alone or in conjunction with auxilliary psychological aids." -*** *Dr Herman S. Schwartz, DC, in "The Foundations of Chiropractic Psychosomatics", The Journal of the National Chiropractic Association, January1954.*

Guyton deals with the influence of the hypothalamus and reticular activating system as parts of the neurological mechanism of psychosomatic illness.

He discusses three routes by which the adverse effects of increased activity of the hypothalamus may occur:

1. **Through motor nerves to the skeletal muscles;**
2. **Through the sympathetic and parasympathetic divisions of the automatic system;**
3. **Through pituitary hormonal secretion. No attempt is made to follow the neural pathways.**

The doctor of Chiropractic must maintain an objective point of view and not be carried to extremes by either the psychosomatic or somatopsychic approach.

Both are important. In one case the emphasis may be required on the former,while in another instance the latter is the secret to unravelling a complex health problem.

The Chiropractic should be acutely cognizant of the importance of structure in every health problem and be astute enough to appreciate that his adjustive ministrations are indicated in each instance.

If mental stress is the basic cause, structural distortion precedes, or is a concomitant of every disease and is deserving of his skill and knowledge.

If mechanical disrelation has upset the affective mechanism and disturbed the ability of the mind to cope with emotional stress, it is crystal clear that correction of the physical is of paramount importance.

Chiropractors have been taught from the days of D. D. Palmer that the cells of the body have the knowledge, Innate Intelligence or homeostatic tendency, to know their own needs for growth, function, reproduction and repair; that the nervous system, was, and is, supreme in coordinating and integrating unit function into organic function and into body function and action; that the

nervous system is all-important in health and in disease; that those factors which interfere with normal neural activity result in disturbed organic, somatic and cellular function; that the disturbances of function are accompanied by the symptoms and tissue changes of disease.

Sachs substantiates the above statement:

> ***"A detailed study of the vegetative nervous system in various diseases of the internal organs. Every pathological condition is obviously associated with disturbances in the autonomic nervous system. The sensations arising from a diseased organ, the pain or discomfort, are conveyed to the higher centres to consciousness. Through the vegetative afferent fibres. Among the evidences of vegetative nervous activity in disease, pain is the most important symptom of disturbance, and in all clinical work the evaluation of pain as a symptom is of paramount importance."*** *- Dr Wulf Sachs, in "The Vegetative Nervous System: A Clinical Study", 1936.*

As this text progresses the reader will find more and more evidence of the truth of this statement and the interdependence of structure and function through the activity of the nervous system.

Reflex Arcs

> ***"Nervous cells present a feature so characteristically developed in them as to be specially theirs. They have in exceptional measure the power to spatially transmit (conduct) states of excitement (nerve-impulses) generated within them.***
> ***Since this seems the eminent functional feature of nerve-cells wherever they exist, its intimate nature is a problem co-extensive with the existence of nerve-cells, and enters into every question regarding the specific reactions of the nervous system.***
> ***This field of study may be termed that of nerve-cell conduction.***
> ***But a third aspect which nervous reactions offer to the physiologist is the integrative.***
> ***In the multicellular animal, especially for those higher reactions which constitute its behaviour as a social unit in the natural economy, it is nervous reaction which par excellence integrates it, welds it together from its components, and constitutes it from a mere collection of organs an animal individual.***
> ***This integrative action in virtue of which the nervous system unifies from separate organs an animal possessing solidarity, an individual.***
> ***There is the mechanical combination of the unit cells of the individual into a single mass.***

> ***This is effected by fibrous stromata, capsules of organs, connective tissue in general, e. g, of the liver, and indeed the fibrous layer of the skin encapsulating the whole body. In muscles this mechanical integration of the organ may arrive at providing a single cord tendon by which the tensile stress of a myriad contractile cells can be additively concentrated upon a single place of application.***
>
> ***Integration also results from chemical agency. There is the integrating action effected by the circulation of the blood. A Simple Reflex is probably a purely abstract conception because: All Parts of the Nervous System Are Connected Together, and No Part of it is probably ever capable of reaction Without Affecting, and Being Affected By Various Other Parts."*** *- Sir Charles Sherrington, MD, in "The Integrative Action of the Nervous System", 1920.*

Progressing now from the single neurone, and its peculiarities to the functional unit of the Nervous System, the Reflex Arc is the next step in the understanding of the Nervous System, and its peculiar, complex and varied functions.

Receptors in skin, tendons, ligaments, joint capsules, muscles, periosteum, blood vessel walls, internal organs, and the organs of special sensation such as the eye, ear, tongue, nose, etc., upon receipt of an adequate stimulus cause a nerve impulse to be initiated in an afferent neurone, which is charged with the responsibility of conducting the impulse into the central nervous system." - in "The Neurodynamics of the Vertebral Subluxation", Chiropractic Publishers, 1973.

> ***'Those Who Understand Physiology and Hygiene: Will, in their Ministerial Labour, Find it a Means whereby they may Enlighten Others in regard to the proper and intelligent treatment of the Physical, Mental, and Moral powers. Therefore those who are preparing for the ministry Should Make a Diligent Study of the Human Organism, that they may Know How to care for the Body, Not by Means of Drugs, But From Nature's Own Laboratory. The Lord will Bless Those Who Make Every Effort to Keep Themselves Free From Disease, and Lead Others to Regard as Sacred the Health of the Body as well as of the Soul."*** *- Ellen G. White, in "Testimonies for the Church", Vol. 6, 1901.*

Carl Jung Knew We Have A Soul, Knew There Is A God

"Carl Jung, he realised that your psyche has a need for the sacred, and the religion. And he said, if you don't have that, if don't a connection to that, that you will project it outward. And that's exactly what happens.

So, you know, liberals, the people I know in Hollywood, they are not spiritual, religious, and so they turn science into a religion.

They turn Dr Anthony Fauci into their deity, and so you can't question it, you can question religion, you're a heretic, so you can't questions science.

Don't do your own research, don't read the Bible, and I saw it happen right in front of my face. **Carl Jung knew we have a Soul, knew There Is A God**, which Freud was totally against all that. Freud was afraid that people would not take them seriously and dismiss them as mystics. And Jung wasn't, **Jung had mystical experiences. He had direct experiences of the divine. He knew he had Direct Experience.** If you read "Memories, Dreams, Reflections" 1961, he talks about it.

> ***"A Book of mine is always a matter of fate. There is something unpredictable about the process of writing, and I cannot prescribe for myself any predetermined course. Thus this "autobiography" is now taking a direction quite different from what I had imagined at the beginning. It has become a necessity for me to write down my early memories. If I neglect to do so for a single day, unpleasant physical symptoms immediately follow. As soon as I set to work they vanish, and my head feels perfectly clear."*** *- Carl Jung, in "Memories, Dreams, Reflections", 1961.*

Look Inside And Know Thyself

I have been going inward.

Jung says:

> ***"He who looks outward, dreams. He who looks Inward, Awakens. Your visions will become clear only when you can look into your own heart."***

And so I have a direct connection to the divine. I've had numinous experiences.

A numinous experience is a sacred spiritual happening, that happens to you.

And it takes you over. I experienced that like when I quit smoking. I felt like there was some outside force telling me to do it. And it was hard.

I was at least 6 months before I could sleep and it was horrible.

I was in bad shape and I just knew I had to quit. I just had this outside, I felt there was something guiding me to this. So I did. And, you know, your dreams are your psyche, or as Jung would call it, the "self" with a capital "S", meaning, you know, the divine talking to you, and speaking to you in Symbols.

And we share a collective, so you have a personal unconscious.

The things that you personally split off from, your own personality and put in your unconscious and your shadow.

Collective Unconscious

And then you have a Collective Unconscious, which Joseph Campbell also talked about. And my first entrée into this was Joseph Campbell, he talked about how different societies who had no way of connecting with each other use the same symbolism to explain life and the spiritual Literally.

One Consciousness

Jung figured that out t**hat we have a Collective Unconscious, meaning there's only One Consciousness.** So, there's not your consciousness, and then God-conscious. **There's just One Consciousness, and we are part of it.**

And the fact that you think you are separate from it, is a mistake.

And so, we are a part of that. **And as we evolve our consciousness, we evolve the world's consciousness. Because we all share a Collective Unconscious.**

And **one of the ways he figured it out, was that he would have dreams, and there would be symbols in his dreams. And he didn't know what they meant.**

But he could tell that they were meaningful. So he had figured out what some of these symbols meant, and he saw them right about the symbols that he was seeing in his own dreams.

So he started to figure out, that **We All Share A Consciousness; That There is One Consciousness.** So it's pretty heavy glimpses of that, I think occasionally.

People in the course of daily life, get just a flash, that, somehow; **There is a Connection Between All Peoples.** It is like, we are hairs on the human head thinking we're separate. They are all; **you are all part of the same head, you are all part of the same body. We Are All A Part of the Same Consciousness.** There is only One. And we have split ourselves off from it. We split that into our own conscious. And if you go into your own conscious; and one of the great ways is to go into your dreams, and see what they are saying to you; and treat it, for: What you seek, seeks you. And so the more attention you pay to your unconscious, the more it will rise up to meet you.

And so I have had numinous experiences, I have experienced the divine, I have experience my encounters with archetypal figures in my dreams that have guided me. After quitting smoking my dreams, they became way more vivid and more often. And so it's been a real awakening. **And I realised that I am not separate from the divine. I realise that I am not this body, that I have an eternal soul. And even though this body dies, that I don't die. That death is not the opposite of life. Death is the opposite of physical birth. Life has no opposite. It's eternal. And so once you realise that, that changes a lot of things. It changes how I look at everything. I look at the Oneness of Everything. I look that this isn't permanent. This body is not permanent.**

That I have an everlasting soul, that I have to pay attention to. That I need to get in touch with. And it fills my life with real meaning. People think they need a priest, or they need a preacher, or a church, which is all good. **The Community Is Good,** but you don't need them, because **you already have a connection to the divine within you.** And that's where you need to go. And once you realise that, then you don't need them. That's why they don't tell you about that.

And Jesus said that:

> ***"The kingdom of God is within you." - Luke 17:21***
>
> ***"The works that I do shall he do also; and greater works than these shall he do." - John 14:12***

And people they don't need you to know that, which is why they get rid of the parts of the Bible that talk about that kind of thing. I was an atheist, I thought this was it. This is it! And when you are dead, you're dead! And, now I realised, no!

It usually starts with a big dream, so I had this dream I was kneeling down in front of my house, in front of the bushes, I had a fish hook on a string. And I was drying it through the dirt in front of my bushes. And in my dream, I am thinking: What am I doing? What am I looking for? And then I saw underneath the dirt, I saw it start moving, like if there was an animal underneath. And I was like, what the heck? And all of a sudden, this black cat emerged, and it was all grimy, and it had an oil-like substance on it. And I am like, how could it be even breathing?

How could it be under there for so long, and not be dead?

Then it got up, and walked around. I'm, like, well, It's alive and willing.

And so, I knew that meant something, I didn't know what. I sought out, and I started reading Carl Jung. And so that was, you know: What you seek is seeking you. That was the divine, the unconscious telling me, you are ready. You are ready to go into your darkness. You are already go into your shadow, you are ready to go in to your unconscious. You don't know what you are going to find there. And it's probably going to be scary, and you don't want to find it, but it's there, and it's ready for you to now take the next step in your conscious evolution.

And so here I am, and I am doing it. I was an atheist. I didn't know.

I asked Carl Jung, is there a God? Do you believe in God?

He said: **"I don't believe I know, because he experienced God from 1913 to 1917."**

[Carl Jung famously stated: **"I don't need to believe, I know"**, during a 1959 BBC interview, **referring to his Direct Ppsychological Experience with the Numinous Forces of the unconscious**; a journey that peaked during his intense personal crisis between 1913 and 1917. For Jung, **"knowing" meant experiencing a psychological reality so powerful that conventional faith became completely unnecessary.]**

I have described it as he could give himself a psychedelic trip in a way.

He could somehow consciously access his unconscious. He could meet the archetypal figures in your unconscious, your anima. **If you are a male, Your soul, he would say, is your anima, which is your female, your feeling function.**

It's real, and it's autonomous and it is in your unconscious. And if you are a female, it's your anima, which is the male counterpart.

[The Need For Polarity: There is no Electricity Flow without Polarity. Current consistently flows from a point of higher potential to a point of lower potential (or, microscopically, negatively charged electrons flow from negative to positive). You need this polarity difference to create the "push" (voltage) that drives the current.]

And so he encountered these figures in his dreams, and I have encountered some of them.

So, I had one of those experiences, it was scary to, it is scary to go into your shadow, and the things you hate about yourself that you realise you've been projecting out to other people. Yes. And so, the idea is that we are going to be able to do that. That's so familiar to anyone who is self-aware. We all do that.

So the idea is you make it conscious, this darkness, this part of you that you hate, you make conscious, and you integrate. You don't judge it because it's also positive in a sense. And you integrate it into your conscious mind, so you don't have to project it on anybody any more. And your consciousness is raised.

So that goal isn't to become a better person, the goal is to become more whole person, and not split off from who you are.

And so that is to me the goal to be, to make the unconscious conscious integrated. And even though you might think it's a bad part of yourself.

But you need that part. **You need to able to set boundaries.**

But you need to aware that where it's coming from, so it doesn't come out sideways, and wreck your life. The idea, is to become whole.

And most people don't do it. It's hard work, because you don't want to see.

And a lot of guilt comes with it, right, because because you find out that in your past, you have done things that hurt your soul, and you feel guilty about it.

And I have had that right where I have realised through my dreams that I've prioritised career, or material possessions over my own soul.

And the overwhelming guilt that I felt in my dreams, and Jung talks about this, that part of becoming conscious is being able to handle guilt.

And I just, I was like, Oh my God.

And so it's people don't want to do this work because it's painful.

[Carl Jung believed that accepting and processing guilt is essential for the lifelong journey of becoming a whole, conscious person; a process he called individuation. Rather than a paralysing burden, he saw conscious guilt as an indispensable tool for moral development, self-awareness, and personal growth.]

> ***"Consciousness and Becoming Conscious Consciousness is the divine light; it is the possibility of seeing oneself, and this means to me that it is the very basis of life. We must sacrifice everything and become again as a child; not to remain a child, be it understood, but to re-enter childhood. This state implies a divinely transformed nature, a higher level of existence, and a more profound realization of the world. Consciousness is only possible if a spark of the essence becomes detached from the unconscious, religiously one could say from God. Consciousness is obviously the supreme quality: the destiny of the world is to achieve entry into human consciousness. Man is the being God has sought not only to show him the world, but because the Creator needs man to illuminate his creation. We must become conscious for God because, through us, God becomes conscious and then becomes man."*** *- Carl Jung, on Consciousness and Becoming Conscious, in "Conversations with C.G. Jung", 1964.*

Jimmy Dore - They don't teach this, they teach Freud because it's easier.

Tucker Carlson - And it's materialism. They don't get it.

Jimmy Dore - They don't teach Jung, Carl Jung **was about, your soul, and your religious experience, your numinous experience, the encounter with the divine, and if you don't have that, you're going to project it.** Just like people did during the "Covid Pandemic."

Tucker Carlson - **It does seem, there is a concerted, organised effort to eliminate any consideration of: The Transcendent, The Eternal, The Divine from People's Consciousness. Like it's never mentioned, it's considered a crackpot, even to talk about that. The idea that there is a world, that we can't see, that is meaningful, that we are connected; in any way other than physically. I mean, I don't think there's ever been a society as determined to deny the Eternal as ours.**

Jimmy Dore - Bill Donahue, he talked about that. Everybody says they believe in spirits, the Lord, the Holy Spirit, and angels. And then, when they show up; you're like, oh, it's crazy. And I was like, yeah, that's exactly what they do. But just don't forget; **The kingdom of Heaven Is Inside You. It's not outside you, it is inside you.**

Tucker Carlson - When did this come to you?

Jimmy Dore - It was right before the "Covid Pandemic". When "Covid" started, I had that big dream, and then I started to go into my unconscious.

Tucker Carlson - Do you notice people around you starting to ask questions, having thoughts like this? It does feel like more people are thinking about it.

Jimmy Dore - **I have noticed, I think people need community. But too often, it's about control, and that you need to get to God, you need to come through me. Which is, you don't need anybody. You have a connection to the divine, and it's inside, it's not external.**

Tucker Carlson - Everyone feels that on some level; it's just kind of weird speaking of the collective consciousness that a lot of people I know, more than 10, started having thoughts like this, right around or just before "Covid." Almost like people were being prepared for what was coming, and gaining a new vocabulary with which to explain it, and understand it. People who had never thought about anything like this at all, who were totally wrapped up in material concerns, accumulating wealth, succeeding at work, just whatever, what we are trained to do. A lot of people I know, all of a sudden, are like, praying! Maybe that's a real thing. Maybe I should listen to voices whose sources I can't see. Stuff like that.

Jimmy Dore - Carl Jung realised at a young age that he had thoughts, that he didn't think himself, that it was placed in his head by God, and **he had direct experience with God. And so I have had those experiences, and not only do I experience God in my dreams! But I realised that everything is a reflection of God. Everything is God in in my conscious life, and my unconscious life. God is everywhere, everything. The Kingdom of Heaven is laid upon the earth, but the eyes of men don't see it. So it's now, now is the time to meet God, to know the divine, and to know your true identity.** I had several dreams that completely changed my life. One of them, at the beginning, I was scared, of this journey. And I was in the jungle, were there was a clearing in the jungle, and I was sitting there, and out from the jungle came this half human, half ape, but the head was like a lion. And it came over to me, and it put his hand out, and I like oh, it's going to crush me. I am afraid it's going to crush me, but it took my hand very gently. And walked me into the jungle. And I am like, what the hell is this, you know. And a couple of weeks later, I am reading a book, and there was that symbol, that lion face, the half face. I was like what? And that's called a Mithraic god. And so that's part of the collective unconscious. That's like this archetype that we all share in our collective unconscious, we are one consciousness that we share. And I was, oh my God. And so I interpreted that to mean that, it's okay. It's going to be safe to go into the jungle of your unconscious, and **I will be there with you, to help you and guide you.** I know people think you are crazy when you talk about this stuff.

Tucker Carlson - Yes, on one level for sure it's forbidden. It's way more forbidden than criticising the State of Israel. I mean, this is the actual, it true though. **This is the actually third rail, I think, is to admit that you've had experiences with the divine or with a realm that is not physical or people are like, come on now. But everyone knows it's true."** - in "Tucker Carlson Show", 5 June 2026.

There Is A Realm Outside of What Is Possible to Measure

"I think that every culture, from the beginning of time has understood that except ours, that There Is A Realm Outside of what is Possible to Measure.

"Science", it can't be quantified in a laboratory, but that is every bit as real as anything that can be quantified in a laboratory. And it has an effect on human affairs, has an effect on the human heart, and that we are subject to it at all times.

God Also Intervenes In Our Lives

God also intervenes in our lives. And I think all of us have felt that too.

And we use different language to describe it, because we don't have theological language, because we are a secular society, to our great detriment. And I think one of the costs of having a committed secular society; a society that affirmatively rejects the possibility of anything that you can't see as being real.

One of the costs is not simply that it cuts you off from God, and therefore from eternal life, which I think it does, but it also makes you stupid, because you think you know, or can answer every question when in fact the most basic questions are unanswerable with "Science."

We don't even know what sleep is for. We have no idea what most of the brain does. We don't know anything actually.

We All Know The Truth In Our Hearts We Call It Intuition

I love human ingenuity. But what I hate is hubris, and the overstatement of knowledge or wisdom. And we greatly overstate ours, in part because we preclude the possibility of any Force in the universe smarter than us.

And so, when you make yourself god, you not only cut yourself off from the real God.

And you on some level know, because We All Know the Truth, in our Hearts, We Call It Intuition, or Instinct, but we know." - Tucker Carlson, in "Jack Neel Podcast", 24 June 2026.

Chapter 3

The Body Electro-Physiology

"This Work is Dedicated to the Educated Men and Women of the World, in the hope and belief that some of them, free from the shackles of Scientific Jealousy, and Unhampered by Medical "Ethics", will come forward and assist in the dissemination of a Great Truth."

The Electrical Aspect of the Human Body

"I would ask those gentlemen to remember that a great humanitarian question is involved and that while my personal opinion upon matters of detail may seem worthy of attack, **The Fundamental Truth I have put forward, 1st in "Electro-Pathology and Therapeutics"; 2nd in "Studies in Electro-Physiology" and for the 3rd time in the present volume is of too great importance to mankind to be passed over, or to be, to all intents and purposes, shelved, by saying there is very little that is new in it.**

One outcome of my research work has been Dielectric Therapy [Treatment modality for urolithiasis (kidney stones), based on the dielectric properties of the stones, it utilizes the dielectric nature of the stones to potentially disrupt them or interfere with their growth].

The use of a standardised paraffin [as a cathartic (please use vegetable base cathartic instead of a mineral base one], in the treatment of local Pyrexia (Fever).

There is abundant evidence to prove that by the use of this remedial agent Pneumonia can be deprived of its danger in a few hours, that it removes all Pain from Burns in a few seconds, and that as it does not interfere with metabolism it promises to displace the antiseptic method of treatment of Wounds.

If that is not new why, I ask, is there no mention of paraffin (cathartic) as a remedy for local Pyrexia in the Pharmacopoeia?

Many hundreds of physicians have had experience of its efficacy.

What I have endeavoured to do is to study natural processes, and to find out exactly what happens and how it happens, and I hit upon a line of research which has been productive of enlightenment.

It has enabled me to explain many things that were lacking of explanation and to view physiological problems from a new standpoint; to peer through the door opening into a hitherto unexplored field and to describe such things as I have been able to see.

Nor is it understandable why if physiologists are capable and experienced electricians they fail to tell us anything about **the Human Electrical System.**

The issue is a plain one: **If I am right then a brighter prospect opens for Humanity.**

Dr Geo. W. Crile, and I have no doubt, other able men are close upon the heels of the Truth.

In the present work I have attempted to give a consecutive **account of the Electro-Physiological processes concerned in evolution**, from the formation of the pollen grain to the completion of the structure of the young plant.

In regard to the other Studies in Electro-Physiology which help to swell the volume, I would point out that the thesis upon the Auditory Apparatus, opens up a, more detailed and reasonable theory of the operation of what has been called "the Mechanism of Hearing".

Students are taught that all vital functions are due to chemical action, and that kinetics play no part in the phenomena. And with what result?

Take any work upon Physiology, and what do we find?

The mechanism of hearing "further investigation of hearing is called for, the function of the Cochlea is imperfectly understood"; the eye, and so forth.

We are not told what causes voluntary muscle to contract; **what the force is that supplies the heart with energy during every second of our lives: what actuates plain muscle, how we see pictures and hear sounds, or why we sleep.**

As it is in animal so it is in vegetable physiology.

Admirable work has been done in Histology, Morphology and in Anatomy.

Those deal with things that can be seen.

The unseen remains for the most part: unseen.

While we all know that the human body is an organism of a much more wonderful nature than any engine invented by man, it is not supposed to be actuated by any motive power at all; or at all events, **no one seems to know what the motive power is, although common sense tells us it must exist.**

In the seed, in the plant, in the cell or cells from which all living things spring, the electrical structure is so clearly evident as to leave very little, if any, doubt as to the form of energy which calls them into activity, and maintains them and the chemical processes associated with them.

It is Chemical or it is Electrical; one or the other — when, clearly, it is both.

The theorist who attributes the performance of body functions to a force resembling electricity cannot but admit that the chemical reactions which accompany those performances are equally vital in their importance to life; he merely postulates that Neuro-Electrical Action is precedent to Chemical Change.

The human body is primarily formed for the exercise of Electrical Functions, but to sufficiently condense that proof.

Let us now consider **Ganglion Cells.**

There are 3 classes of these:

1. Unipolar Cells.
2. Bipolar Cells.
3. Multipolar Cells.

1. Unipolar Cells: The first of these are in association with the "closed" circuits of the sensory nerves only. They are really storage cells in a state of charge and their office is to maintain electrical equilibrium by "giving" or "taking" as the case might be, and to hold our store of reserve energy.

2. Bipolar Cells: Those of the bipolar type are condensers of higher capacity than synaptic junctions.

3. Multipolar Cells: are built up of a number of Leyden-jar-like rings, each of which is on a separate circuit and may be linked up with arborisations for the purpose of changing the sign of current where required.

As regards the vegetable world, let us, as we have done with the human body, go back as far as we can, to the beginning of things, and study the seed; selecting, for illustration, one with which we are familiar and which is large enough for its structure to be seen with the naked eye.

We will take an edible chestnut in its pod, for it is very similar in appearance to a foetus in the womb and for that reason more than ordinarily interesting.

In normal conditions of weather the air is the positive and the earth the negative terminal of Nature's electrical system.

Everything growing in the earth is negatively charged through the roots, stems and venation, and positively by the air through the aerolae (small circular area) of the leaves, so that in the roots, stems and venation the tree or plant has its negative and in the aerolae its positive terminals.

There is, in fact, an ordinary electrical circuit, i.e., air to earth, and earth, through the plant, to air.

It is well-known that the vegetable cell is practically identical with the animal cell and that the phenomenon of division or reproduction is common to both.

In at least one respect **a seed does not differ from either vegetable or animal cell, i.e., it is a potential Leyden-jar.**

Before the seed can germinate its substance must be continually and adequately electrified.

Why, then, cannot it germinate while in its pod?

I have remarked that **the tendency of seed electrification is to mature or advance the development of the embryo**, but when we ponder the application of electricity to horticulture and agriculture the first and most important thing to bear in mind is Nature's own method.

The air is the positive and the earth the negative terminal of the natural electrical system, and the current is continuous, not alternating.

Positive air and negative earth mean that there is, in normal conditions of weather, a downward driving force, with a return through the roots, stem and venation of the plant; the aerolae of the leaves taking in Oxygen — plus air electrification and light energy to stimulate them to growth.

There is convincing evidence that cell division is an electrical rather than a chemical phenomenon. It is necessary to remind that the air is the positive and the earth the negative terminal of Nature's Electrical System.

Electrical circuits are of 2 kinds, i.e., "earth return" and "metallic."

In the former one pole of the battery at each end is connected with the earth; in the latter with a second wire.

That, I take it, is understood.

In the natural circuit the negative terminal is necessarily "earthed" because it is the earth itself.

To complete the circuit the plant or fruit must have access to the positive air.

In trees and plants this is gained through the stomata of the leaves, while in fruits the flower end (whether the flower is decayed or not), is never quite closed." - Arthur E. Baines, in "Germination in its Electrical Aspect", 1921.

The Science of Electro-Physiology

"From the article "The Human Body as a Disturbing Element in Electrical Testing":

> *"I am of opinion that in every case where use is made of an unshunted galvanometer of great sensibility* ***the operator should be careful to connect himself during the test with an earth plate, instead of, as is usual, standing upon some insulating substance. This conclusion was forced upon me years ago."***

The article attracted the notice of Dr Stone of St. Thomas's, a correspondence resulted, the preparation of his Lumleian lecture the subject being:

"The Human Body Considered as an Electrolyte."

Although working in different sections of the field of scientific investigation, we had both arrived at one conclusion, viz., that local Pyrexia (fever; a raised body temperature), interfered with local insulation resistance.

We know, and at all events it can be demonstrated, that **Man Is A Self-contained Neuro-Electrically controlled machine, dependent for the due performance of his functions upon a constant supply of nerve-energy at a low potential;**

that nerve-force is generated in the body with each inspiration, and that the nerve-impulse is Neuro-Electrical, and not chemical.

It may reasonably be assumed that in all probability electricity plays a part in the vegetable as well as in the animal world.

Investigation has shown the soundness of this theory, as I hope to be able to prove, and further research at the hands of men more capable than myself may lead to far-reaching consequences in the direction of an advancement of our knowledge of practical horticulture and floriculture.

The conclusions arrived are as follows:

1. Everything living, whether animal or vegetable, has a well-defined electrical system; the non-living possessing capacity only; and that only in conjunction with moisture.

2. The edible part of a fruit or vegetable is the positive element, or that part which yields a positive galvanometric reaction.

3. Dry earth is a bad conductor of electricity, and therefore **water is required as an electrolyte as well as being necessary in the formation of protoplasm**, etc.

4. Every tree, shrub, plant, fruit, vegetable, tuber, and seed is an electrical cell, differing from cells made by human agency in that it cannot be polarised or discharged so long as it remains structurally perfect.

5. The skin, peel, rind, or jacket of fruits and vegetables is of the nature of an insulating substance primarily designed for the conservation of their electrical energy.

6. The Electro-Motive Force of them all is the same; the current varying in accordance with Ohm's law.

7. Plants grown in pots, or removed from the earth and placed in other receptacles different materially in their electrical constitution from those grown in the earth.

8. If a suitable electrolyte, other than water, is, mixed with the soil it is possible to grow plants with much less moisture.

9. Growth may be stimulated by means of a continuous current of electricity of low potential, and proper sign.

Neuro-Electrical System: Nerve-Force

Physiologists have all failed to recognise, from their own works, that **the structure of the body is primarily electrical.**

If it is so one cannot be surprised, in the absence of such recognition, that the practice of Electro-Therapeutics is empirical.

A necessary preliminary to curative treatment is knowledge of the human Neuro-Electrical System; the generator or generators of Nerve-Force, the natural conductors and dielectrics, the condensers and storage cells and their capacity, and, what is of paramount importance, the influence of disease upon any or all of them.

Until that knowledge is acquired treatment cannot be said to rest upon a scientific basis.

To the careful observer the structure of the human body must appear to be primarily electrical, and to be designed for the performance of electrical functions, not necessarily outweighing in importance those chemical changes which are essential to life, but taking precedence of them.

In the human body the velocity of the nerve impulse is not everywhere the same, nor could it be so unless the inductive capacity was uniform throughout, and this, obviously, is not the case.

Retardation, or the portion of the current retained upon the surface of the wire, is also dependent upon, among other things, the length and diameter of the wire or, in other words, upon its resistance.

And here note should be taken of the fact that the effect of capacity is to produce prolongation at the end as well as retardation at the commencement of a current; so that a current takes longer to leave the line than it did to enter it.

In the human body neither the resistance of any given circuit nor the same difference of potential can be maintained owing, quite apart from disease, to variations of external temperature and the fluctuating nature of the human electromotive force; and the fact is emphasised that in the estimation of body deflections we must have a fixed point of departure, and that that point should be upon the central line.

Hand-to-Hand Deflection and Thumb Pressure

The importance of the hand-to-hand deflection, as being the measure of the electromotive force exerted in the body at the time of testing, is fully treated in the chapter upon Ohm's law and Electro-Diagnosis, but it may serve a useful purpose to explain what happens when there is inequality of pressure of the 2 thumbs.

The body is connected in the galvanometer circuit by means of 2 suitable metallic electrodes, grasped in the hands, and a certain deflection is obtained.

The thumbs carry a greater quantity of current than the fingers, so that if one is pressed harder than the other the deflection is altered, while if one thumb is relaxed and the other pressed down there may even be a reversal of sign, because the direction of current is determined by the path of least resistance.

In my work upon **Electro-Pathology and Therapeutics**, I stated that **the thumb of each hand was of opposite sign to the fingers of each hand and carried a greater quantity of current.**

Dr Martin's letter upon **"The Source of Body Energy and its Relation to the Nervous System",** says:

> *"The Theory of Neuro-Electricity, Galvanometric Tests, and Treatment, founded upon the theory propounded by Mr Baines, has proved of Value in the Treatment of Certain Conditions of Disease. Digestive Organs, Nervous System, etc., are present, but are functionally in abeyance till the act of birth has taken place.*
> *What, then, is the difference?*
> ***It is the act of breathing which determines the separate existence of the child from the mother. Before this act has taken place the lungs contain neither blood nor air.***
> ***Their function could not be called into play until the need arose to Link up the Life, with Its Future Source of Energy. The Act of Birth, therefore, Brings with It the Power to Use a Mechanism by means of which the Oxygen in the air, can be Used by the Body.** From that moment the whole of the latent mechanism is in working activity and the individual life is complete. **The whole arrangement of the Nervous System, nodes, synapses, medulla, sheath, ganglia, etc., points to an Electrical System** with many makes and breaks, shunts, etc., and we have shown before that the Fundamental Energising of the Body is an Electrical Phenomenon. Returning to the blood-stream and for the moment leaving out the specialised organs and glands, we come to the question of connective, fibrous, and elastic tissues. Subcutaneous and other vascular connective tissues may be regarded as the padding of the body. **We have a multitudinous cell-life, vascularity, and a controlling nerve supply.** Here, then, we have a storage of energy separate from the closed circuit of the nervous system; closed in relation to the other tissues of the body. **In this tissue, as in the specialised organs, the interchange from blood to cell goes on,** but in this case we get some diffusion through moist tissues and only partial insulation by the skin. This no doubt gives us the average reading on the galvanometer scale of ordinary normal deflections, except in the case of the finger-tips and toes, which give constant readings and are probably the earth (air) outlets of the nervous system. At the finger-tips, no matter how dry the skin may be, we are always able to measure a current. Also reversal of sign is obtained from hand to hand and from the thumb to the fingers of the same hand. With other portions of the skin over the body a comparatively dry condition will lead to no current being obtained, while **moisture will produce a current equal in Electric and Magnetic Fields at any part."** - Dr Martin*

In the human body none of the conducting plates, discs, or points are of large area, but while no considerable variation of capacity is possible by this means, Nature can, and apparently does, overcome the difficulty by approaching the conductors closely to each other, as in striated muscular fibre, and by connecting them sometimes in parallel.

In other parts of the body structure (in various arborisations, for instance), there must be differences of capacity and resistance, and therefore **velocity of current or Nerve-Impulse cannot be uniform throughout the whole of the Nervous System.**

Only from the "living" can any reversal of sign, implying an electrical system, be obtained.

In the "non-living" there is no difference of potential unless introduced by some exterior vehicle of energy.

Every plant that grows in the soil has a nervous organisation.

The earth is the negative terminal of Nature's Electrical System, as the air, in normal conditions of weather, is the positive terminal; and every tree, plant, or vegetable is charged by the earth, through sensory nerves, or closed circuits, extending from the roots through the stem and stalks and thence to the veins (nerve-fibres or fibrillse) of the leaves.

These all yield a negative galvanometric reaction, while those parts of the leaves between the veins, as well as the flower end of all vegetables and fruits, are of positive sign. **Not only have plants nerves, but I shall be very much surprised if they are not found to possess a lower form of motor apparatus as well.**

With special reference to the velocity of the nerve impulse the experiments of Dr Le Bon are of importance. He came to the conclusion that electricity is able to propagate itself in insulators as well as in conductors, but much more slowly in the first case than in the second, the velocity varying from a few centimetres to 300,000 kilometres per second. In the enormous margin between the two there is ample room for speculation as to the causes which contribute to the comparative sluggishness of the human nerve-current.

The same authority showed that the particles emitted by an electrified point were identical with those which came forth from radium; suggesting, by inference, that the force known as electricity may be made up of more than one form of energy.

Cardiac Muscle

The structure and precise functioning of cardiac muscle; several facts, stand out prominently:

1. Is intermediate in structure and properties between voluntary and involuntary muscle;
2. Contracts more slowly than ordinary striped muscle;
3. Is striated (marked with long, thin parallel streaks);
4. Has no true sarcolemma: "although there is a thin superficial layer of non-fibrillated substance." - Schafer.

Considering, as we must do, each segment as a sarcomere (the smallest functional unit of striated muscle tissue), it will be seen that the segments differ in length and in diameter (permitting of infinite variation of tension); that some are non-nucleated, and that there are branch, or shunt, circuits which no doubt play their part in the inductive regulation of tension in an **Automatic Neuro-Electrical System**, because, although the heart's action may be subject to psychological influences, it must be supplied, from within or without, with energy unintermittently, and therefore must form part of an automatic system.

And here, we may begin to appreciate the beautiful regulation exercised by the Vagus Nerves. The energy, partly self-contained or not, which, in life, is constantly supplied to the heart, is by way of the sympathetic, while the vagus nerves are inhibitory, or, in other words, exert a governing or opposing electromotive force. They are buffers, or springs, regulating the flow of energy to the heart, much in the same way that a rise or fall of temperature may regulate the fall or rise of a gas-flame in a heating apparatus. **I am convinced that when the nervous system is studied on electrical as well as chemical lines and in relation to Ohm's law, a great advance will be made in our knowledge of the human organism.** There are in the human body many structures and substances which, although not in themselves of very high resistance, may, in view of the low tension of the nerve-current, be termed Dielectrics (a material poor conductor of electricity, but an efficient supporter of electrostatic fields). Among these are the sheaths of medullated and the lipoid coatings of nonmedullated nerves; the capsules and membranous coverings of and in cells; the sarcolemma (the fine, delicate, extensible membrane surrounding each muscle fiber), and neurilemma (thin sheath around a nerve axon); Krause's membranes of voluntary muscular tissue, neuroglia processes and connective tissue, etc. **The effect of heat upon any and every known dielectric is to lower its resistance.**

On Disease in General

In connection with Electro-Diagnosis I have postulated that any physical change in the body must be attended by a Neuro-Electrical change, which can only be galvanometrically detected; and that the process of restoring the one to normality tends, automatically, in the great majority of disorders, to restore the other to normality. **Disease is a deviation from the state of health, implying some alteration in the functions, properties, or structure of some organ or tissue, and may be generally described as an abnormal performance of the processes constituting life. That being so, it would be illogical to imagine that one of the most delicate and most necessary of those processes, i.e., the maintenance and regulation of the Neuro-Electrical System, could proceed without deviation in any diseased area. In Electro-Diagnosis and body-testing generally the patient must be connected for some minutes with an "earth" of low resistance in order to remove any possibility of charge from a source of energy other than that of the body itself, and if this is to be accomplished it follows that the tension of the body must be plus and that of the earth minus, otherwise there would be a transfer of electricity from the earth to the body instead of from the body to the earth.**

The human body is liable to be influenced not only by being placed in an earth circuit but by induction; its normal electromotive force of 4 or 5 millivolts can only be a plus quantity in favourable circumstances.

Neuro-Electrical System

Considering, as we must do, each segment as a Sarcomere (the fundamental structural and functional unit of striated muscle tissue; skeletal and cardiac muscle), it will be seen that the segments differ in length and in diameter (permitting of infinite variation of tension); that some are non-nucleated, and that there are branch, or shunt, circuits which no doubt play their part in the inductive regulation of tension in an automatic Neuro-Electrical System, because, although the heart's action may be subject to psychological influences, it must be supplied, from within or without, with energy unintermittently, and therefore must form part of an automatic system.

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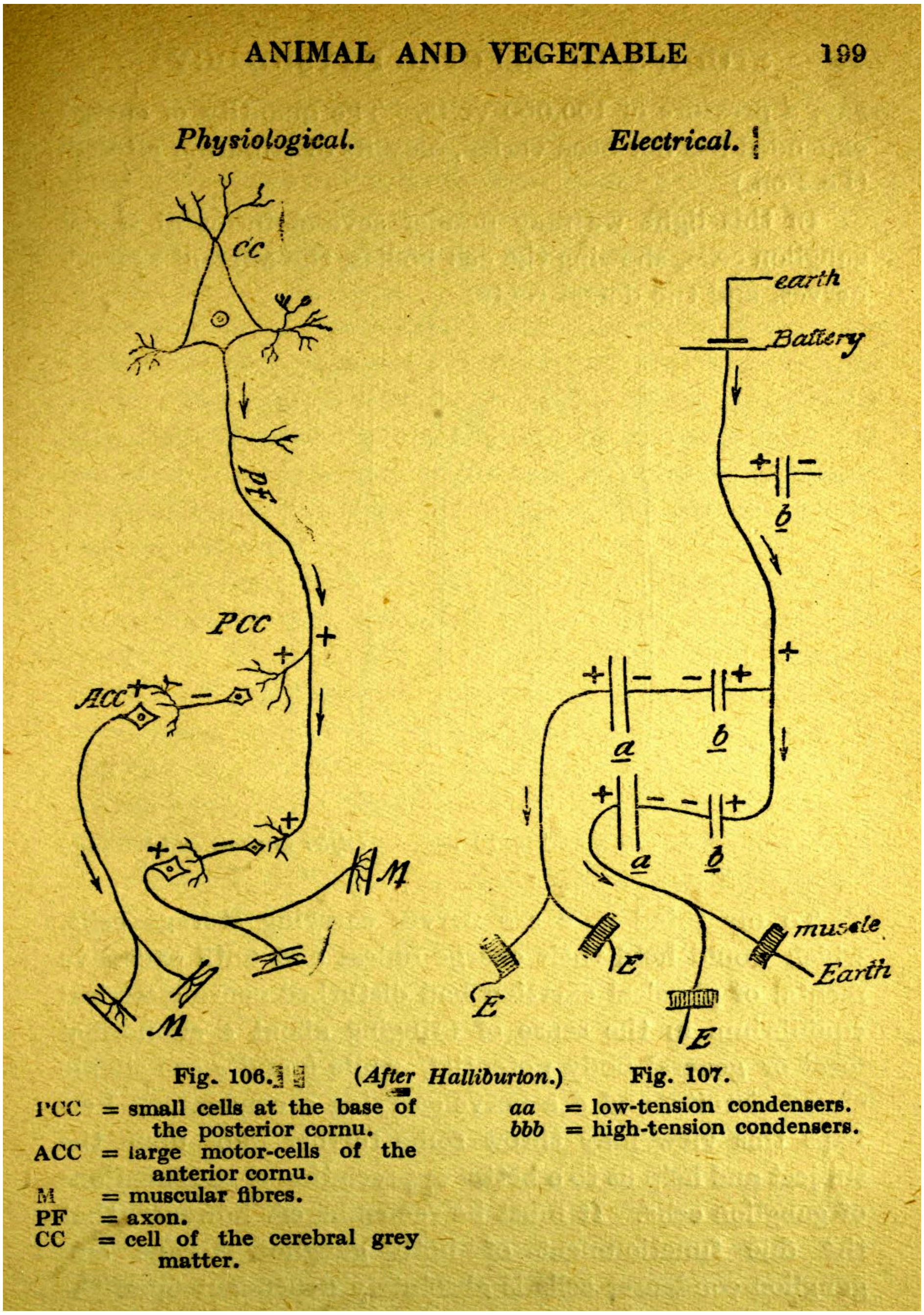
Neuro-Electrical Equilibrium

From an electrical point of view some Ganglion Cells are condensers and some storage cells, but this statement calls for elaboration.

In telegraphy; and the brain, it is necessary to remember, both sends and receives messages; one of the functions of a condenser is to maintain electrical equilibrium, and, when required, to change the sign of current; whereas the function of a storage cell is to receive a charge and to hold it until some disturbance of Neuro-Electrical Equilibrium calls for its delivery, either wholly or in part. In this connection let us consider ganglion cells with a view to attempting to differentiate the condenser pure and simple from the storage cell.

Condenser-ganglion cells should be studied more especially in relation to the sympathetic system, the nodes of Ranvier and the structure of the muscles, bearing in mind not only the change of sign, i.e., from downward to upward current, or from efferent to afferent, but control of regularity of supply.

Assuming there to be, for instance, a flow of nerve-energy of a certain potential from the brain along, say, the sympathetic, the current strength would vary with the resistances in circuit in obedience to established laws, but it might be necessary to regulate both current strength and sign at different points of the circuit.



ANIMAL AND VEGETABLE 199

Physiological.
Electrical.
CC
PF
PCC
ACC
+
−
M
M
earth
Battery
+
−
b
a
b
a
b
E
E
E
muscle
Earth

Fig. 106. (*After Halliburton.*) **Fig. 107.**

PCC = small cells at the base of the posterior cornu.
ACC = large motor-cells of the anterior cornu.
M = muscular fibres.
PF = axon.
CC = cell of the cerebral grey matter.

aa = low-tension condensers.
bbb = high-tension condensers.

In this light we may ponder several forms of spinal ganglion cells, showing the cell bodies, the afferent sensory nerves, and the dorsal roots.

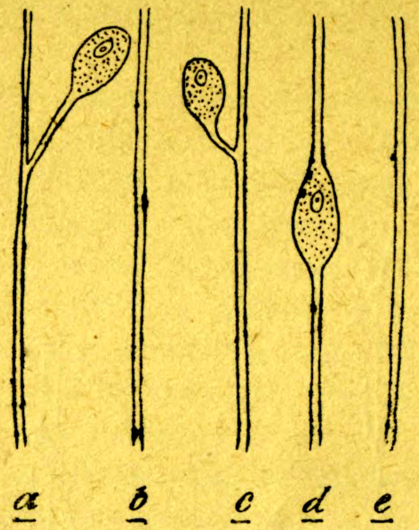


Fig. 108. (*After Landois and Stirling.*)

To my mind a, c are nerves carrying storage cells, which would hold their charge unless and until excessive mental or physical exertion had disturbed Neuro-Electrical Equilibrium in the sense of bringing about a subnormal local or general body potential, while b and e are simple closed circuits, and d a nerve carrying a condenser. Perhaps this view may throw some further light upon the subject and help us to a better appreciation of the functions of ganglion cells.

It must be remembered, however, that the due functionment of both ganglion storage and ganglion-condenser cells is absolutely dependent upon the maintenance of their normal insulation resistance. Should the absolute insulation of the storage cell be broken down to any extent there would be defective storage, and if the resistance of the insulating membrane in the condensing cell were broken down or altered there would be a "fault." In works upon Physiology confusion is caused by the uncertainty which attaches to the meaning of the word "stimulus", "impulse", "irritation", and "charge" when applied to nerve cells, but if it be accepted that the natural impulse is neuro-electrical, and that the changes which take place in nerve-cells and processes are due to alteration of nerve potential, sign of nerve current, or variations of external or internal resistance, a clearer appreciation of the laws which govern the nervous system may be obtained. Now, it is quite obvious that if the organs of the body connected with the transmission of impulses, the maintenance of Neuro-Electrical Equilibrium, the conservation of energy, and the contraction of muscular tissue are to function properly, the temperature of every part of the whole organism must not exceed the normal, which we may take to be, subcutaneously, about 37.8° C.

Protoplasm dies, I am informed, at about 45.5° C., and as we know that cells do die in the area affected by acute inflammation, we have a right to postulate that, in that area, there may be a rise of temperature of at least -12° C. above the normal." - Gladys T. Baines, in "Studies In Electro-Physiology", 1918.

Nerve Cells and Nerve Fibres

"We may now consider nerve cells and nerve fibres in so far as they form part of the Neuro-Electrical System of man. Nerve or ganglion cells occur in large numbers almost solely in the brain and spinal chord. From an electrical point of view they are condensers and storage cells, and each one connects with a number of delicate fibrous processes which either communicate with other nerve cells, or pass through the body to end in some organ. The brain is the seat of the intellectual life of man. Volition and imagination; to quote from a recent work; and the processes of thinking and perceiving originate in the nerve cells and are dependent upon them. If all the nerve cells of the human body suddenly ceased to act, all intellectual life would come to an end at the same moment, but if only some of them were destroyed, only that part of mental activity which resided in the destroyed cells would be lost. There are also nerve cells whose only duty it is to preside over the functions of speech and so on. Nerve fibres are the continuations of the processes of the nerve cells. Their course is from brain and spinal cord, and they are really insulated wires carrying messages from the brain and spinal cord to the various organs of the human body. The brain may be regarded as the central station or departmental telegraph office, and the nerve fibres as the telegraph wires, which run from it to the smaller sub-stations; the organs of the body. The nerves and nerve fibres are classified according to the organs in which they terminate, as: Motor nerves; secretory nerves; sensory nerves; and herves of special sense. Motor nerves terminate in muscle. Before a certain muscle contracts **The Impulse to do so, originates In One or More Cells in the Motor Area of the Brain."** - in "Electro-Pathology And Therapeutics", 1914.

Bioelectricity And the Electrome

"The Nerve Impulse (the essential component of neuronal language), is nothing more than an "Electrical Impulse", which in Neuroscience is called an "Action Potential". Each "Action Potential" represents a computation, a combination of received signals whose result is binary: either there is a potential or there isn't; either there is a nerve impulse, or there isn't. These Electrical Signals, are the messages transmitted throughout the Nervous System to connect this vast network to every corner of our body. Sensory stimuli, such as: Temperature, Touch, Vision; are detected in our body by specialized receptors in the skin or organs and transmitted to the brain along nerve fibers that ascend through the spinal cord. But just as the electrical message originating from a prick in a finger informs the brain that we feel pain, it sends another message in the

opposite direction to order the finger to move away from the cause of the injury. Within the Brain, Nerve Fibers connect the Sensory and Motor areas so that a Two-Way Communication, Stimulus and Response, can be established. All these Nerve Fibers use Electricity. In the Nervous System, Electricity Is Generated From Ions, Not Electrons like household electricity. It Is of Lower Intensity, and travels at a Slower Speed. In 1780, the Italian scientist Luigi Galvani was one of the first to propose that Nerves, and Muscles Use Electricity to Function. Later scientists continued these investigations, culminating in 1952 when the British Physiologists, and Biophysicists Alan Hodgkin, and Andrew Huxley described the Ionic Composition of the Action Potential. By then, the small voltage changes that occur during nerve impulses had already begun to be recorded. Thus, it was determined that the conduction velocity of the nerve impulse along nerve fibers reaches a maximum of 27 meters per second, which implied that it could not be due to electron flows like in electricity, which flows at the speed of light. Other types of charges had to be responsible, and, the Most Abundant In Cells Are Ions. But what kind of Ions? Cells contain many types: Calcium, Magnesium, Potassium, Sodium, Chloride, and others." - in "Cerebro: Los secretos del órgano más complejo", 2019.

[Ions are essential electrically charged atoms or molecules in cells, categorized as positively charged cations or negatively charged anions, which facilitate critical physiological functions like cell signaling, nutrient transport, and nerve impulse conduction. **Key intracellular ions include: Potassium, Magnesium, and Phosphate,** while extracellular fluids are rich in Sodium, and Chloride.]

The Ionic Milieu

The German internist Friedrich Kraus, physiologist S.G. Zondek (and associate Theodor Brugsch) pioneered this concept in the early 1920's. They published foundational work "Die Allgemeine und Spezielle Pathologie der Person"

[The General and Special Pathology of the Person], 1924, proposed that:

The Body Internal Fluids Act as an Interconnected, specialised Ionic System (The IonenMilieu).

"This leads us, finally, to recognize the important influence which the Ionic State has on the functioning of the autonomic and sympathetic systems.

But the Ionic State itself only represents one aspect amongst many which determine the reaction. According to Friedrich Kraus and S. G. Zondek, the proper functioning depends on the establishment of a definite equilibrium between the electrolyte and colloidal particles. **Also, the cell wall potential, which influences the colloidal state of the cells, which in turn is so important for their activity, is, according to these investigators, dependent upon a great number of factors: on the cell membrane, the salt-electrolyte, the hormones, poisons, etc., and lastly, on the vegetative nervous system.**

General Interaction:
Reflex and Retroaction of Periphery on Nervous Center, and Vice Versa

Finally, **the facts compel us to acknowledge that all the numerous factors that have been isolated are really influencing each other. The more many sided the investigations are, the more they show the manifold interrelation of a multitude of factors influencing the Life Process. Of all these factors I wish to emphasize only the influence of the peripheral processes on the function of the central nervous system (stressing this influence).** We started by a consideration of the dependency of the peripheral processes on the function of central apparatus, and now **we have to recognize the converse influence. We know that this influence occurs partly through afferent nerve action, for example, the regulation of Breathing, and partly it takes a physical form, as in the regulation of temperature, or it may be of a chemical nature, and play an important role in: Circulation, Respiration, Metabolic Processes. We must further insist upon the relationship between vegetative and spino-cerebral processes, especially, the psychic processes. As Bruecke has particularly emphasized, probably all tissues of our body, not only the so-called viscera, are under the influence of the vegetative system.** We know this to be true with regard to muscle tonus, muscle metabolism, and also with regard to the sense receptors. When the vegetative system is influenced by drugs, changes are found in the chronaxie of the peripheral sense-organs. (Foerster, Altenburger and Kroll) Similar conditions were revealed in changes of the water metabolism and regulation of body temperature.

(Achelis) **The spino-cerebral system is probably influenced by processes in the vegetative system, just as they, in turn, influence the latter. Finally, recent research has disclosed an extraordinary number of facts that demonstrate a far-reaching interaction between vegetative and mental processes. It must be stressed that such a relation holds not only for emotional processes but also for sensory perception. Even the preparedness for Mental Performances in general shows more and more its Dependency on the Automatic Nervous System."** - in "The Organism: A Holistic Approach to biology derived from pathological data in man", 1934.

The Ionic State

Alfred North Whitehead, in "Science and the Modern World", 1925, stated that: The Electrons - The Ionic Milieu - Behave Within the Body In Accordance With the Purposes of the Body, i.e., The Mental States (p.99). Today we know that There Is No Such Thing As Two Identical Electrons. The reason is simple: it is not possible to delineate the entity we call electron. We do not know where it starts nor where it ends. The electron is the expression of a force in a field.

"Human beings are, in all aspects of life, developing organisms.

The most subtle reaction to our organic development is mental activity. Kraus answers the question of the connection between body and soul as follows:

All psychological processes are determined by physical parallels in the central nervous system. The physical parallel remains essentially functional, whether or not it leaves a material residue. Intelligence and Character are subjectively dependent variables of nervous processes. Nothing subjective directly interferes with the determinations of physiological processes.

The psyche is functionally dependent on the physical, unambiguously assigned to it. "Our organization requires no psychological and/or physiological explanation, but it can only be fully described as psychophysical."

Kraus's view of life as a whole, in accordance with Spencer, is that it is a

> *"Specific combination of dissimilar changes, both simultaneous and successive, in connection with external simultaneities and consequences, or also... an adaptation of the connection between internal and external relationships; the general pathology of the person, as we have always seen, is largely one of disturbed vital equilibria."*

Thoughts are not merely signs of sensations but "independent entities within the psychic correlates of the highest division of the central nervous system."

Even the conscious perception of psychic elements always corresponds to an unconscious physiological process, which is connected with other observable physiological processes. Mental processes are themselves indeterminate; only the physical organization can connect and separate them. States of mind, in themselves, have nothing to do with consciousness. Consciousness is merely a characteristic feature of present experience and activity. The unconscious is "not a by-phenomenon of psychic life, but rather its very essence"." - in "Münchener medizinische Wochenschrift", 2 January 1920.

"Science is taking on a new aspect which is neither purely physical, nor purely biological. It is becoming the study of organisms. Biology is the study of the larger organisms; whereas physics is the study of the smaller organisms.

An Electron Within a living body is different from an Electron outside it, by Reason of the Plan of the Body; but it Runs within the body in Accordance with its Character Within the Body; that is to say, in accordance with the general plan of the body, and this plan includes the Mental State. But the principle of modification is perfectly general throughout nature, and represents no property peculiar to living bodies. In subsequent lectures it will be explained that this doctrine involves the abandonment of the traditional scientific materialism, and the substitution of an alternative doctrine of organism. The fundamental principle is that, whatever merges into actuality, implants its aspects in every individual event. Further, even for self-cognition, the aspects of the parts of our own bodies partly take the form of aspects of shape, and of sense-objects.

But that part of the bodily event, in respect to which the cognitive mentality is associated, is for itself the unit psychological field. Its ingredients are not referent to the event itself; they are aspects of what lies beyond that event.

Thus the self-knowledge inherent in the bodily event is the knowledge of itself as a complex unity, whose ingredients involve all reality beyond itself, restricted under the limitation of its pattern of aspects. Thus we know ourselves as a function of unification of a plurality of things which are other than ourselves. Cognition discloses an event as being an activity, organising a real togetherness of alien things. But this psychological field does not depend on its cognition; so that this field is still a unit event as abstracted from its self-cognition. Accordingly, consciousness will be the function of knowing.

But what is known is already a prehension of aspects of the one real universe.

These aspects are aspects of other events as mutually modifying, each the others. In the pattern of aspects they stand in their pattern of mutual relatedness." - Professor Alfred North Whitehead, in "Science and the Modern World", 1925.

> ***"And conscious, percipient acts are parts of the environing actuality of every act in Nature. So we see that no concrete happening or act or process is without private, internal tone or without public imprint. The essential in life is originality and creativeness."*** *- in "The Philosophy of Alfred North Whitehead", 1941.*

> ***"When we refuse to get in line with nature, as registered in the faulty purposes of life - i.e., our mental states - even the kidneys, the blood pressure and urea, proteid, ionic milieu become involved and this is but one formula for many diseases."*** *- Dr Smith Ely Jelliffe, MD, in "Sketches in Psychosomatic Medicine", 1939.*

The Nature of Mathematics
Its Unity and Internal Structure And Its Applicability to Nature

> ***"The object of the following Chapters is not to teach mathematics, but to enable students from the very beginning of their course to know what the science is about, and why it is necessarily the foundation of exact thought as applied to natural phenomena."*** *- Professor Alfred North Whitehead, in* ***"An Introduction to Mathematics"****, 1911.*

> ***"We are now approaching the limits of any reasonable certainty in our scientific knowledge; but again there is evidence that the concept may be mistaken. The mysterious quanta of energy have made their appearance, derived, as it would seem, from the recesses of protons, or of electrons. Still worse for the concept, these quanta seem to dissolve into the vibrations of light."*** *- Professor Alfred North Whitehead, in "Process and Reality", 1929*

The Electrome

"Hodgkin and Huxley's work on voltage changes along neurons during an action potential earned them the Nobel Prize in 1963.

Bioelectricity opens the door to numerous treatments.

Our organism is so complex that it also comprises other "-omes", such as the proteome, the exome, the metabolome, and the Microbiome.

Moreover, all these "-omes" interact with each other.

These "-omes" (a Greek suffix meaning: **collection, cluster, or biological structure), include the Electrome**.

In the 18th and 19th centuries, we began to truly understand and control electricity. The work of Luigi Galvani, an Italian physician and physicist, involved experiments with frogs. Galvani noticed that when electricity was applied to the muscles of dead frogs, they contracted as if they were alive.

Galvani theorized that this was due to what he called "Animal Electricity", a form of vital energy he believed flowed through living beings.

Galvani's experiments, in which he claimed to have **discovered "hidden electricity in the nerves"**, were to have a significant impact, marking a turning point in scientific research.

These experiments, along with subsequent ones, led to the development of new areas of research surrounding Electricity, as well as the eventual invention of the Electric Battery by Alessandro Volta, who was directly inspired by Galvani's work.

Finally, the invention of the electric battery ended the focus on and conceptualization of electricity itself: it was no longer seen so much as a fluid linked to biology as something that allowed machines, all kinds of chemical reactions, and other non-living elements to function.

Gradually, **Electricity has acquired a major role in all biological processes** in general.

Following the experiments of Emil du Bois-Reymond, a 19th-century German physiologist, who made important contributions to the field of **Bioelectricity by demonstrating that an Electric Current Flows Along Nerves** when they are active, the next major milestone in bioelectricity came in the 1950s, when physiologists Alan Hodgkin and Andrew Huxley succeeded in measuring changes in voltage along neurons during an action potential and developed a mathematical model to explain these changes, work that earned them the Nobel Prize in Physiology or Medicine in 1963.

It had already been established that **neurons communicate through electrical impulses, and that muscle cells contract in response to electrical signals.**

Furthermore, the heart contracts according to a coordinated sequence of electrical activity that can be mapped using an Electrocardiogram. **Similarly, brain electrical activity can be mapped using Electroencephalography. It also began to be demonstrated that these processes play a fundamental role in both brain development and repair, and that they are involved in all cognitive functions, from learning and memory to sensory and motor processing.**

Unlike conventional electricity, which comes from the manipulation of electrons in a conductor, such as a copper wire, **Bioelectricity is generated differently: through the Ions present in our bodies, such as sodium, potassium, calcium, magnesium, and zinc. These Ions attract and repel each other, generating a current that propagates throughout our bodies. Although this current is very weak (barely 70 millivolts, compared to 1500 millivolts in a common AA battery), it is essential for communication between different parts of the body.**

Although the body electrical current passing through a cell may be tiny compared to the current powering an electrical appliance, the relative voltage is enormous due to the minuscule thickness of the cell membrane. If this voltage were scaled up to the size of a human being, it would reach up to 10 million volts.

All the cells and tissues in our body use the same process to communicate, including neurons, nerves, muscles, cartilage, and the gut. Even the microbes in our gut and cancer cells generate electrical signals. In a broad sense, we could think of "Electrome" as a term that refers to the study, mapping, or cataloguing of all electrical activity in the body or a cell.

We Are Electric

> ***"We Are Electric is about the natural electricity that surges through all our bodies.***
> ***Over the next few hundred pages I will teach you about the substance that courses through All Living Things, underpinning their every move and intention.***
> ***This Natural Electrical Current predates Nervous Systems and even humanity itself.***
> ***It is the most ancient thing about us. It is among the most ancient things about life itself.***
> ***We are fundamentally electrical creatures. How wholly and utterly your every movement, perception, and thought are controlled by electrical signals. This is not the electricity that comes from a battery. That kind of electricity is made of electrons, which are negatively charged particles flowing in a current.***
> ***The human body runs on a very different version: "Bioelectricity."***
> ***Instead of electrons, these currents are created by the movements of mostly positively charged Ions like potassium, sodium, and calcium.***
> ***This is how all signals travel within the brain and between it and every organ in the body via the nervous system, enabling perception, motion, and cognition.***
> ***Figuring out how electrical messages are sent through the body got a lot easier once we figured out the structure of the brain and spinal cord and the special cells that enable them to pass communications.***
> ***These are called nerve cells, or neurons.***
> ***All this was established in a series of groundbreaking insights known as the Neuron Doctrine, which won Camillo Golgi and Santiago ramón y Cajal a Nobel Prize in 1906.***
> ***It was the first time we understood how the nervous system worked.***

> *But the fight graduated to near war with the discovery of how the signal hops from one cell to the next. This is because that message hits a little speed bump at the end of the axon. There, it encounters a tiny gap that separates the axon of one cell from the dendrite of another. This gap is called a synapse, christened the same year the Neuron Doctrine won its progenitors the Nobel.*
>
> *The discovery of a gap between cells that were meant to be transmitting an electrical signal revived a lot of doubts about the still-fragile idea that animal electricity is real and that the nerve impulse is electric. After all, an electric signal can't travel over an air gap in telegraph wires, so why should it be able to do so in the wires of the nervous system?*
>
> *In 1921, the discovery of chemicals called neurotransmitters, which float across the synapse's gap, only deepened those doubts. Their experiments showed for the first time, in indisputable detail, exactly how the action potential is carried down a neuron by electrically charged particles, without whose electrical properties and activity nothing would happen at all. Those particles are called Ions.*
>
> *Ions are Atoms with a positive or negative charge. The fluid that bathes every one of your cells – there's a lot of it, and it's the reason you always hear that you are 75% water – is teeming with them. The Ions that are dissolved in this so-called "Extracellular Fluid" Bear a Strong resemblance to the constituents of Seawater: mostly Sodium and Potassium, with smaller amounts of other stuff including Calcium, Magnesium, and chloride. Their precise concentrations inside and outside each neuron are the primary determinants of whether an electrical signal is permitted to pass.*

Neurotoxins

> *In the 1960s, research on Neurotoxins had clarified that many of these natural poisons affect sodium and potassium balances, throwing into chaos the delicate mechanisms that make cellular communication possible–acting like a reverse Ringer's solution.*
>
> *Neurotoxins pry open all the doors, which has the same eventual effect: the cell can't communicate any signals to other nerves or muscles.*
>
> *No cell can survive without functional ion channels. One of the more astonishing features of the Electrome is that animal electricity is by no means confined to animals. We're not the only ones with these ion channels. All the other kingdoms are run on the same stuff." -* in *"We Are Electric: The New Science of Our Body's Electrome", 2023.*

This experience with **brain electrostimulation spurred his decade-long research into the Interrelationship Between Electricity and Biology, and all the possibilities this field of knowledge offers.**

> *"Following my physics degree education at Imperial College London, I fulfilled my childhood dream of studying the body's electricity, initially (and for 25 years) on the electrophysiology of retinal neurones but also on a variety of other model systems. The whole of my academic career has been spent at Imperial, rising to Professor of Neurobiology in 1995.* ***Curiosity took me to studying electrical signalling in cancer cells where I discovered the voltage-gated sodium channel as an engine of cancer."*** *- Dr M. Djamgoz, Emeritus Professor in Cancer Biology*

Dr M. Djamgoz, Emeritus Professor in Cancer Biology at Imperial College London, has developed a revolutionary **cancer treatment that involves blocking Ion channels in cancer cells.** Some studies suggest that **cancer cells may have altered ion channel activity profiles compared to normal cells, which may contribute to their malignant behaviour.** For example, **some types of Ion channels may be overexpressed in cancer cells, allowing them to maintain a faster rate of cell growth and division. Bioelectricity has great potential for cancer treatment, this is not its only use. It can also be used to heal wounds. Skin cells generate an electric field when injured, which attracts healing agents to the injury site to accelerate the healing process.**

Researchers have been exploring ways to harness and enhance this process, which could be especially useful in cases where healing is slow or complicated, such as in people with diabetes or chronic wounds. **Some strategies that have been investigated include the use of bioelectric bandages or devices that can deliver a Low-Level Electrical current to the wound.**

The idea is that: By Strengthening the Existing Electric Field or providing one if the natural field is insufficient, cell migration to the wound area can be promoted, thus accelerating the healing process.

Many doctors and biologists have limited knowledge of physics, and may find the idea of electricity as a cure intimidating. In the field of Bioelectricity, there is a fundamental law, a universal rule that is applicable and can be extrapolated to all human beings equally. Understanding the full scope of the Electrome will require much more than simply mastering Ion channels or understanding the nervous system. It will require a significant interdisciplinary effort and a critical examination of how the structure of current science may limit scientific understanding. It will also require rethinking the materials we use to interact with our electricity.

Biology, far from being a simple collection of living organisms, is increasingly revealing itself as a fascinating and **complex web of interconnected layers, one of which is electrical.** Almost 3 centuries ago, **the Study of Electricity** shifted from biology (Galvani) to physics (Volta). **The time has come for it to return to Biology."** - in "Muy Interesante", Spain, October 2023.

The Body's Electrical System

"The body's internal energetic control systems are subtle, and they operate with minute amounts of Electromagnetic Energy.
A little goes a long way, and very often, more is not better.

It is important to emphasise that:

The Body's Electrical System operates using currents that flow in only one direction, which is referred to as Direct Current (DC)." - Robert O. Becker, in "Cross Currents: The Promise of Electromedicine", 1990.

Life Is Electricity

"The Human Body is a Body Electric. As more recent medical research has discovered, the human body itself is an electrical system.

Chemical reactions taking place constantly throughout the body create electricity that moves from one part of the body to another.

And, like any other electrical system, the human body suffers when its currents go awry.

Life Is Electricity

Life is defined by Electrical Movements in the body. When electricity stops moving: that is death. Life and Electricity are very closely related. A once-startling medical technique that takes advantage of this connection; sending electricity directly into a patient's body, has become commonplace.

Electricity also plays a less obvious role in treating illness and saving lives.

Electricity can be a kind of medicine itself. Doctors send a flow of electricity directly into a patient's body to stimulate a muscle, to deaden pain, or even to tell a patient's heart how fast to beat. This is what doctors mean by medical electricity; electricity used as a treatment for illness or injury. You are familiar with electricity as some mysterious, powerful force that comes from outlets in the walls of your house and makes machines run.

Electricity is what happens when Ions come near one another, and Electrons move from negative Ions, to positive Ions.

The ability of electrons to move in a definite direction; to flow in a current; is a basic feature of electricity. Charge and current both help explain how the human body produces electricity and transmits it throughout the body.

Neurons and Electrochemistry

The basic building block in the human electrical system is a spidery cell known as a neuron. Neurons make up your brain, your spinal cord, and a network of nerves that carries electrical messages throughout your body. At the center of each neuron is a cell body, where most of the neuron's activity occurs. From there, several extensions called dendrites branch out. One longer tube-like structure, called the axon, also projects from the cell body. The dendrites can pick up signals from other neurons in the neighbourhood.

The Axon helps carry such signals toward still other neurons or toward Muscles and Glands. This signal-transmission process is Electrochemical: That is, Electricity and Chemicals both play a role.

The attraction between positive and negative ions, as well as the current they can create, is very important in the way neurons work. How could the muscles in your hands, arms, and legs get messages from your brain? Your body's electrical system made it possible. Because your Nerves were properly conducting Electrical Signals to your muscles, you were able to leave your chair in the living room. Electricity even allowed you to taste the drink, to know that it was cold, and to feel." - in "Electrifying Medicine: how Electricity sparked a medical revolution", 1995.

The Influence of the Nervous System

"That which is true of the Heart, is true of every organ of the body; **not one of them can originate the power necessary for its own activity. They all possess the ability to make manifest a power transmitted to them; but they cannot originate this power. The Nervous System alone, Possesses the Power of Originating Vital Activity. A Rational Method of Cure consists in the restoration of the Nervous System to a normal condition.** There are about 70 elements in nature; about 15 of these are found in the human body; hence, the human body, viewed from the chemical stand-point, is a combination of 15 elementary bodies.

1. If these elements are present in proper amounts, proportions, and combinations, the resultant product must be a perfectly healthy human being.

2. Whenever disease exists, it must be because some of these elements are in excess, or are deficient; or because there is some fault in their combination; such excess, deficiency, or faulty combination, being due to some cause working from within, or to the influence of some poison introduced from without.

If the Nervous System has ceased to generate vital force, all the organs and functions come to a stand-still. The Nervous System is the Vitalizing Department of the Human Body; that it Originates Vital Force and transmits it to the different organs and parts of the body; the Nervous System presides over,

regulates, and controls all our functions; a normal nervous system will produce normal function; an abnormal nervous system will produce abnormal function; no matter where located." - in "The Annals of Hygiene", January 1897.

The Science of Electro Therapeutics

"Absence of adequate knowledge of the electrical system given by Nature to man has rendered the practice of Electro Therapeutics little more than experimental. He holds the view that Nature's methods cannot be improved upon, and merely claims for himself that he has endeavoured to understand those methods, and understanding them; in some measure at least; to apply them to the amelioration and cure of a few of the ills which afflict humanity. In reality many of the disorders from which we suffer, many of the affections whose origin is obscure are simply and easily dealt with when their locality, area, and nature are ascertained.

The Nervous System in Its Relation to Neuro-Electricity; The Function of Nerves in the Human Body

The Nervous System is that which is most important to the subject-matter of this treatise, and therefore requires special consideration. It forms a most complicated set of links between the various parts of the body, and for the purpose of closer study may be said to consist of the following divisions:

1. Central Nervous System, which is formed by the brain with its extension in the spinal cord.

2. Distributing System, which includes the cranial and spinal nerves, and the nerves of the special sense organs.

3. Motor and Automatic Nerves.

4. The sympathetic system, which co-ordinates the action of the whole.

The Central Nervous System, the most important portion of which is the Brain, is in all vertebrated animals, including man, situated within the cranium or skull, which is the apex of the spinal column, of which it forms a part.

Electricity Is Life

A Necessary Preliminary to Curative Treatment is knowledge of the Human Electrical System; the generator or generators of Nerve-Force, the conductors and dielectrics, the condensers and their capacity, and what is of paramount importance: the influence of disease upon any or all of them.

It has often been said that: "Electricity Is Life."

Qualify the statement somewhat and say that Nerve Energy which resembles Electricity, is vitality, and I agree, because we always find that a high standard of Nerve-Force, or a high Neuro-Electrical potential, and mental and physical vigour are synonymous terms." - in "Electro-Pathology and Therapeutics: An account of many years Research Work", 1914.

The Electric System of the Body

Concerning the Electric System of the Body; Every Emunctologist, should know, should be aware that: The Nerves Are the Electrical System of the Body.

Nerve-Force

The Supply of Nerve: Is the Nerve-Force.

Nerve-Energy

The air, when entering the lung, force forms and produces new Cell Energy to the whole system, so that each unit of Energy has its incentive to carry to the various portions of the body the force, and power which it is to exercise and use to the proper rebuilding, and to the keeping of an equilibrium throughout the system. This is Nerve-Energy.

"We know, or at all events it can be demonstrated, that Man Is A Self-contained Neuro-Electrically controlled machine, dependent for the due performance of his functions upon a constant supply of Nerve-Energy at a low potential; that Nerve-Force is generated in the body with each inspiration, and that the nerve-impulse is non-electrical and not chemical.

If that is so, and it cannot successfully be disputed, it may reasonably be assumed that in all probability electricity plays a part in the vegetable as well as in the animal world. Investigation has shown the soundness of this theory, as I hope to be able to prove, and further research at the hands of men more capable than myself may lead to far-reaching consequences in the direction of an advancement of our knowledge of practical Horticulture and Floriculture.

Briefly, the conclusions at which I have arrived are as follows:

1. Everything living, whether animal or vegetable, has a well-defined Electrical System; the non-living possessing capacity only; and that only in conjunction with moisture.

2. Broadly speaking, the edible part of a fruit or vegetable is the positive element, or that part which yields a positive galvanometric reaction.

3. Dry earth is a bad conductor of electricity, and therefore water is required as an electrolyte as well as being necessary in the formation of protoplasm, etc.

4. Every tree, shrub, plant, fruit, vegetable, tuber, and seed is an Electrical Cell, differing from cells made by human agency in that it cannot be polarised or discharged so long as it remains structurally perfect.

5. The skin, peel, rind, or jacket of fruits and vegetables is of the nature of an insulating substance primarily designed for the conservation of their electrical energy.

6. The electro-motive force of them all is the same; the current varying in accordance with Ohm's law.

7. Plants grown in pots or removed from the earth and placed in other receptacles differ materially in their electrical constitution from those grown in the earth.

8. If a suitable electrolyte, other than water, is mixed with the soil it is possible to grow plants with much less moisture.

9. Growth may be stimulated by means of a continuous current of electricity of low potential and proper sign.

In normal conditions of weather and in countries free from frequent seismic and magnetic disturbances, the Earth is always the negative and the Air the positive terminal of Nature's Electrical System. Everything, therefore, that grows in the earth is charged by the earth through the roots, and by the air through the flowers and leaves (the lungs, as it were, of the tree or plant), so that in the roots, stem, stalks, and veins the tree, shrub, or plant has its negative terminals, while those parts of the leaves between the veins are positive.

Examination of the vascular bundles and laticiferous vessels of plants will make this clear. In all fruits and vegetables the negative and positive systems are plainly discernible." - in "Studies in Electro-Physiology", 1918.

A Note Concerning Nerve-Force

The supply of Nerve, that is the Nerve-Force in itself proper.

A uniform supply of Blood-Force, gives more uniform Nerve-Force.

An inaction of the Nerve-Force on the brain: lack of force results in the lack stimulation to the matter in the brain; thus disturbed equilibrium results.

Lesions along the spine; create a lack of Nerve-Force. An impediment upon the Nerve-Force; results in a lack of nutriment in the system.

The physical man, that is, the body in itself, that is the whole man that includes the physical self, mental self and the abnormal body, or the abnormal mind. In the physical body, the attributes, that is the muscular force of the body and the circulation, that is, the blood force in the body, rebuilding the body in itself, that is, the structure outside, the bone and the muscle of the body.

Both Toxaemia, and or Injury to the Body System, can produce conditions in the body that effect on to the mental, and mind of the body, thus producing abnormal conditions in the body system. Through the muscular force or through the blood supply. The Nerve-Force to the body, which is the attribute to the mental man, same as the circulation to the physical, the nerve of the body is to the mental, or to the brain force, which is the head, the moving power, of the physical man. An impression to the Nerve-Force carried by the muscular force of the body to the brain, makes an impression to be used as to how to move the forces in the physical man, to the betterment of his condition.

The Abnormal Mind, or that is, the working power between the brain force or the Nerve-Power in the body, is to the body that which takes care of the body, or that takes care of the involuntary forces in the physical and mental man.

That is the action between the nerve and the brain, or that active self that takes place. The same force that propels the circulation, that puts out the hand or takes it away when it is hurt; the same force that gives the feeling to the nerve of the physical man. These are 3 attributes, or 3 forces in the human body.

Through the Abnormal Mind, or sub-conscious condition of the body, takes control of the system, producing within it then the condition to the mental mind, to the physical body of the whole man.

Or, in other words, have it prepossessed from the outside.

This can produce taxing conditions. The physical man by this force on the nerve of the body supplying then more cells in the brain, or breaking up of these cells. An impression to the Nerve-Force carried to the brain, makes an impression, or destroys a cell, whereby the impression is left.

The action is the abnormal, not the abnormal condition, physical or mental, but the abnormal mind working in the man.

The effects we have on the Nerve-Force (that is, through the electrical; life is electrical force), the same action we have in the body of the Nerve-Force is to the Mental World, Electrical.

The Scientific Research, the Clinical Research which Is principally of the Emunctology School, the Teachings of the Atomic and Vibratory Force, using only those of a Very Low Ray of Light in diagnostic ends. This may easily be seen to be made to include Treatments from the Health Lights in Rooms, so that the diagnostic end may be made a portion. These are indeed revolutionizing the effects as may be brought to bear on the human element, and its relation to the Atomic Forces, which are Necessarily of Light and its vibrations.

> ***"That which is regarded as a superstition in one century, may form the basis of science for the following one."*** *- Theophrastus Paracelsus*

"All Living Cells Are Composed of 2 Essential Elements; the nucleus and the protoplasm in which it is bathed.
This nucleus is itself composed of many tubular filaments: the chromosomes.
In addition, hundreds of such small filaments or chondromes are present in the cytoplasm.
Chromosomes and Chondromes are present in the cytoplasm.
Chromosomes and Chondromes are Sheathed in an Insulating Substance, and contain a Liquid like Serum, with the Same Mineral Content as Sea Water, and Consequently a Conductor of Electricity.
Thus, these filaments constitute ultramicroscopic oscillating circuits of very short wave lengths.

I have demonstrated in my works that these cellular oscillating circuits, chromosomes and chondromes, vibrate electrically under the stimulus of electromagnetic waves:

1. Cosmic
2. Atmospheric
3. Telluric

Many internal, and external influences may upset the oscillating equilibrium of these cells." *- Georges Lakhovsky, in "The Secret to Life", 1941.*

Knowledge of The Electrical System Given by Nature to Man

"The object of this treatise is to present to the medical profession and the general public the results of 30 years research work with instruments of precision. The microscopical part of the work having been carried out by Dr Bowman, MD, and the Electrical by Mr Baines.

The object of the physiological investigation which forms the first part of the book was to endeavour to determine the nature of the influences which favour the growth and multiplication of inimical organisms, such as bacteria in the blood, and which are a cause and consequence of disease.

Absence of adequate knowledge of the Electrical System given by Nature to man has rendered the practice of Electro-Therapeutics little more than experimental.

He holds the view that Nature's methods cannot be improved upon, and merely claims for himself that he has endeavoured to understand those methods, and understanding them (in some measure at least), to apply them to the amelioration and cure of a few of the ills which afflict humanity.

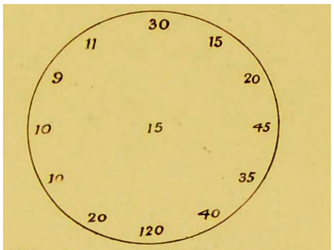
There are several instruments to the medical man.

They will not distinguish between Chronic Constipation, or Dyspepsia, and Cancer in its early stage: they do not throw any light upon disorders of the brain or diseases of the middle ear, upon St. Vitus Dance, or Neurasthenia, or exophthalmic Goitre, or give the slightest indication of the nature of the great majority of ailments until they become outwardly apparent.

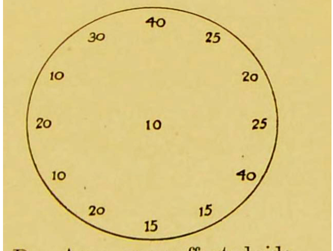
What is required is an instrument which will enable the practitioner to say, "This is so-and-so" with absolute certainty.

In the future the new method of diagnosis will become universal, and in the hands of a large number of scientific men will do a great deal to revolutionise the practice of medicine as it is today.

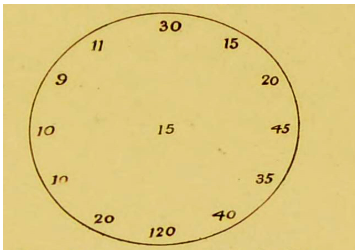
Cancer



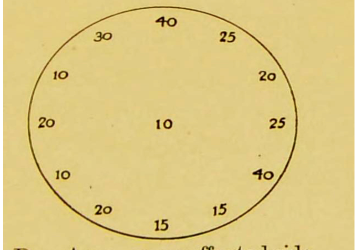
C = Area, on unaffected side, of B.



D = Area, on unaffected side, of A.



C = Area, on unaffected side, of B.



D = Area, on unaffected side, of A.

A = Area of the secondary deposits.
B = Cancerous growth.
C = Area on the unaffected side corresponding to the Cancerous growth.
D = Area on the unaffected side corresponding to the secondary deposits.

A gave the following deflections, taking the numbers 1 to 12, as the hours on a dial. With the exception of the 120 millimetres at what we may call 6 o'clock on C, most of the deflections from C and D are consistent with the hand-to-hand deflections of the patient.

The Cancerous growth itself, however, is apparently dielectric in character, interposing a very high resistance to the passage of Neuro-Electricity through it, or being in all probability an absolute non-conductor.

In A the hours 10, 11, and 12 are suggestive of a Cancerous Condition, while the higher deflections at 4 and 7 may be due to the presence at those points of Septic Matter.

But however that may be, this suggestion occurs to my mind: If we can establish beyond any reasonable doubt that:

An Absence of Conductivity Is A Condition Peculiar to Cancer;

We have at least discovered an infallible means of detecting its presence; in time for Curative Measures to be effectually adopted.

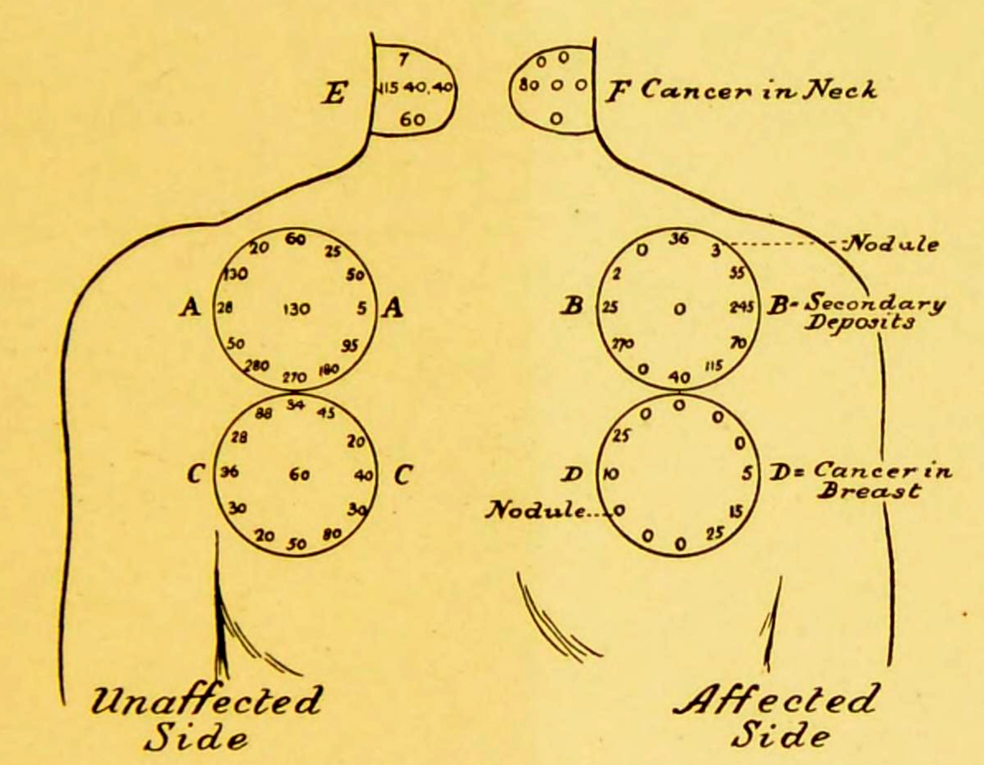

E
7
115 40.40
60
0 0
80 0 0
0
F Cancer in Neck
A
60
25
50
5
95
180
270
280
50
28
130
20
130
A
36
3
55
245
70
115
40
0
270
25
2
0
0
Nodule
B
B- Secondary Deposits
C
34
45
20
40
30
80
50
20
30
36
28
88
60
C
D
0
0
0
5
15
25
0
0
0
10
25
0
Nodule...
D= Cancer in Breast
Unaffected Side
Affected Side

FIG. 17.—Cancer in Neck and Breast.

Cancer in Neck and Breast

Here we have a similar, if not precisely similar, Electrical Condition, with the exception of Septic Matter (if the high deflections are caused by inflammatory Septic Matter), invading A at points 5, 6 and 7 (analogous to B at points 3 and 7), while the other deflections on the unaffected side are what might be looked for from the hand-to-hand deflection.

Another interesting feature is the line of cancer from D through B to E, or vice versa.

The Liquid Cells Are Always Ionised

The liquid contents of the nerve substance are greater than that of the covering membrane, and the liquid cells are always ionised.

Why We Have Been Left So Long In Ignorance

If anything I have said appears to be in any way boastful let me say at once that I regard the discoveries I have been permitted to make from a purely impersonal standpoint, and without any consciousness of self-appreciation. I can, in fact, only wonder that it has remained for so obscure a person as myself to direct attention to such obvious truths; while if there appears to be anything marvellous in the curative measures I have adopted, a little reflection will show that they are simple measures which must have suggested themselves to any electrician conversant with the class of work to which I have been accustomed.

There is, however, one reason for wonder, for astonishment so deep as to close the door, as it were, to possible explanation, and that is:

"Why and how it is we have been left so long in ignorance."

." - in "The Nervous System in Its Relation to Neuro-Electricity; The Function of Nerves in the Human Body, Electro-pathology and Therapeutics, 1914.

Energy Flow is the Primary Factor

"Energy flow is the primary factor.

Energy is the real substance behind the appearance of matter and forms.

It is best for man to work with Nature and to be in tune with Nature and with God instead of giving in to his own desires to control anything besides himself.

The whole constitution of man must be taken into consideration, not merely the treating of the body as a chemical or mechanical machine.

In this age of over specialization, with emphasis on chemistry, bacteriology, and mechanical and surgical research, we have lost sight of the over-all picture of man as a living being with lines of force working in fields of finer energies.

Even as the tiny atom is a universe in itself, so is man.

God geometrizes.

Faith coupled with effort always gets results.

Causes are primary factors to correct.

If external cleanliness is said to be next to Godliness, what could real internal cleanliness accomplish?

We are what we eat and drink.

What we feel and what we think.

We will become that which we contemplate.

We cannot think negative thoughts and reap positive results.

Health is not merely of the body, it is one in all. Health is movement. Disease is fixation.

Never force anything, physically or mentally. Nature's way is gentle growth."

- Dr Randolph Stone, DO, DC, in "Writings", 1981.

The Flow of Life-Forces

"Psychic Healing ability was many times demonstrated by Saint Thérèse of Lisieux, known for her "little way" of spiritual life, which emphasized small acts of love and trust in God's mercy to achieve holiness.

This takes the form of laying on of the hands to cure broken and protruding bones, in extreme cases.

Almost every type of human affliction in which enhancement of the flow of life-forces of the victim would bring about the cure, Therese could enhance, or amplify this vital cosmic energy flew through the bio-system by stimulation from her mental-system.

Therese's administrations succeeded in many, many instances.

Over the world today, there are a sufficient number of successful psychic healers, some even performing lawfully in British Medical hospitals, to enable science to accept the fact that the bio-energy flew through the living human body regulates health and even the healing thereof.

Science as yet is not able to either agree that there is such a bio-energy flow, or indeed to give it a name.

It has shown that it is a "cousin" of what we call Electricity, but here-in will be outlined a number of reasons why that is not the whole story.

Cellular Mitogenetic Radiation is another definition.

Mitogenetic Radiation refers to the Ultraviolet Radiation, discovered by Alexander Gurwitsch in 1923, that is emitted by dividing cells and stimulates other cells to divide." - in "Overlords and Olympians", 1996.

Prioré Cancer Treatment

"For 2 years I had been consumed with curiosity about the affair, named after its principal character, Antoine Prioré, an Italian-born inventor noted by his enemies for his lack of formal education and by his friends for his intuitive genius.

Prioré, I knew, had been tinkering with odd, complex electromagnetic contraptions of his own design for 26 years since his days as a radar technician in the Italian Navy.

What education he received was from an Electronics School in Bologna.

Prioré would later tell me that **he had serendipitously discovered that certain Ultra high-Frequency Electromagnetic Waves, presumably somewhat akin to those utilised in the radar devices with which he was so familiar, had the power of preserving fruit; an orange that had inadvertently been exposed to the radiation, he noticed, remained unspoiled much longer than it should have.**

Assuming that the radiation must somehow have been responsible, he decided to experiment, soon verifying, that the shelf life of various fruits, and vegetables could be significantly extended by exposing them to certain Electromagnetic Waves.

It filled a good-size room, its panels of knobs, dials, lights and energy units banked against the 4 walls so that there remained only a small space in the center of the room for a table, over which was suspended a huge nozzle, through which emanated the output of the machine, the ray itself. Just what the invisible ray consisted of, Prioré steadfastly refused to say, other than to characterize it as "an electromagnetic wave in a magnetic field."

Many French scientists have been more interested in trying to establish a positive correlation between the amount of government funding accorded Antoine Prioré and the various levels of political power to which Chaban-Delmas has attained than in verifying the in **correlation between Priore's mystery radiation and cancer cures in laboratory animals.**

It was through the Chief Veterinary officer of the city of Bordeaux that Prioréwas persuaded, in 1960, to **permit two members of the University of Bordeaux Faculty of Medicine to expose rats grafted with cancerous tumors to the radiation of the machine.**

To the amazement of Professor J. Biraben, and Dr G. Delmon - all tumour growth was halted.

Prioré Machine, he continued, at last provided an opportunity for scientific evaluation of the biological effects of "radiation in an electromagnetic field."

The field was defined only as having an intensity in the neighbourhood of 620 gauss-about 1240 times the power of the natural earth field.

The frequency of these waves was said to be approaching that of gamma radiation. Some 48 rats of the same heritage, age and health had been selected for the experiment that Professor Courrier related. All had fragments of the same uterine T8 cancer tumour grafted beneath the skins of their backs.

The Results

Among those experimentals which were given immediate treatment, the tumours were quickly and totally absorbed.

Where treatment was delayed, exposure had to be prolonged in order to obliterate the cancer. But obliterated it was-until all of these animals, as well, were in perfect health, with no trace of cancer. The experimentals were observed for several months and there was no recurrence of the disease.

All of the controls, meanwhile, died between the 22 and 30 days after grafting.

Prioré may soon have an earned doctorate attached to his name.

The inventor has completed all the doctoral requirements of the University of Bordeaux, including his dissertation:

"Healing of Acute and Chronic Experimental Trypanosomiasis by the Combined Action of Magnetic and Electromagnetic Modules."

Next, the researchers wanted to know whether the radiation could vanquish trypanosomiasis, after it had become entrenched. Rabbits were used in these experiments because the disease produces in them a chronic malaise in which they decline toward death far more slowly than mice.

Infected rabbits that were still living at the end of 3 weeks were exposed to the radiation; improvement began to manifest itself almost immediately, but the treatments, when initiated at this advanced stage in the evolution of the disease, had to continue for 12 hours each day for about 20 consecutive days on average before healing was complete.

In the course of one of the rabbit studies, Prioré gained another powerful supporter in the person of Gaston Mayer, a well-respected reproductive scientist.

In collaboration with Professor Pautrizel, Professor Mayer **found that the normally irreversible testicular degeneration caused by trypanosomiasis could be overcome with the radiation.**

At the conclusion of this exercise, the results were much as before of the 30 mice inoculated with the parasite and then treated with the machine, 29 lived.

A 1972 paper, entitled "Action of Electromagnetic Waves and of Magnetic Fields on Lipid Modification Provoked in the Rabbit by Administration of a High-Cholesterol Dietary Regime."

It was authored by Professor Pautrizel, Prioré, Modeste Dallochio, Rene Crockett, and presented to the Academy by Professor Courrier.

Sure enough, **the results indicated that the radiation might make a significant contribution in the fight against Heart, and Vessel Disease.**

The Delegation Generale a la Recherche Scientifique et Technique (DGRST), one of the top French government scientific agencies.

The director of DGRST, Pierre Aigrain, a physicist who received some of his training in the United States and who, recently, was conducting research at M.I.T.

Dr Aigrain, who has held various high government posts, and is noted for his work in the complex physics of semiconductors, was at a loss to explain the underlying principles of the Prioré apparatus, despite the fact that he has personally examined the machine.

"None of the possibilities of resonance appear to answer to the known laws of physics", he was quoted as saying at the conclusion of that examination.

It is now beyond theory however, that electrically charged atoms, and molecules called Ions, exist in the cells, and quite naturally interact with Magnetic Fields, whether natural or man-made.

In this connection, the work of Dr Andrew Bassett and his associates at Columbia University's College of Physicians and Surgeons is instructive.

They recently reported that broken bones exposed to certain electromagnetic fields heal substantially faster than fractures that do not have benefit of this stimulative treatment. In one of Dr Bassett's studies: "fracture disability time" was reduced by 50%.

The healing probably takes place as a result of voltage-induced changes at the site of the cell membrane. Dr Bassett believes, New Scientist notes: "that electromagnetic stimulation has the effect of changing the membranes ability to hind such Ions, as Calcium, Magnesium, and Sodium."A number of other recent findings suggest that electromagnetism may have a profound impact on enzymes, the essential catalysts of metabolism.

In one study, for example, magnetically deprived mice (those placed in extremely low magnetic fields), suffered shortened life-spans, unfavourable tissue alterations, infertility and “drastic changes in enzyme activity”, that were said to be “potentially lethal.”

A recently developed Navy study demonstrated that low-frequency fields could, at a level of statistical significance, increase the blood triglyceride levels of man (Triglycerides are lipids which, have been implicated in atherosclerosis).

The Navy research suggested that low-frequency fields effect a decrease in the activity of an enzyme that helps suppress blood triglyceride levels.

It is not illogical to assume that certain high-frequency fields might affect the magnetically vulnerable lipids and enzymes in another, perhaps opposite, direction the Prioré apparatus he looked at, the machine featured, among other things, a vacuum tube containing a plasma of mercury and neon gas.

This Plasma was apparently subjected to the simultaneous action of a pulsed 9.4 gigahertz electromagnetic wave (one oscillating at 9.4 billion cycles per second, a very short radio wave, indeed) modulated on a high-frequency wave of 17 megahertz (17,000,000 cycles per second).

These waves, Dr Aigrain said, were produced by radio emitters and magnetrons in the presence of a 1000-gauss magnetic field.

The experimental animals were maintained during their treatments in this magnetic field through which the radiation had to pass, perhaps becoming mixed or altered in some fashion in the process.” - in **“Do the French Have a Cure for Cancer?”**, Esquire, 1 July 1975.

We Need a Plasma-Based Physics Rather than an Atom-Based Physics

The universe is alive and well! Space is not empty and forlorn; on the contrary, we live in the boundless embrace of a sentient field of cosmic plasma and have only just begun to realize its presence.

In 2022, Professor Robert Temple, issued a most important Monograph on that which makes up 99.999% of the Cosmos: Plasma.

Plasma not only governs the vast expanse of myriad galaxies and stars but, according to Temple, is also the essential substance of living organisms, a “bioplasma” that not only explains the fantastic organization and workings of our bodies, but overlaps with our Biofield (the energy body), that connects phenomena like consciousness and telepathy with what happens at the moments of conception and death.

Plasma Is 99.99% of Everything That Is

The visible (baryonic) matter in the universe, is composed of Plasma.

While solids, liquids, and gases are common on Earth, they are rare in the cosmos:

1. Abundant State: More than 99% of the visible universe (stars, nebulae, and interstellar/intergalactic matter) is in a state of plasma.

2. Definition: Plasma is an ionized gas, meaning it is a mixture of free electrons and positive ions created by high temperatures or strong electromagnetic fields.

3. Visible vs. Total: It is important to note that this 99.9% figure applies only to "visible" or baryonic matter. When factoring in dark matter and dark energy, which make up roughly 95% of the total universe, the total composition is more complex.

4. Solar System: Our Sun, which is a giant sphere of plasma, contains about 99.85% of the total mass of the solar system.

We Need a Universal Science Not an Earth Science

“Plasma is not made of Atoms; because it's made of Particles: Charged Particles. What is charged? Well, now here's something that very few scientists will admit; because it's so embarrassing; that basically would like to hide in a corner. The fact is that; we don't know what charge is.

And we don't know what mass is. We don't know what force is. We don't know what a field is. We use these words, and we have these concepts which are undefined. So, the only way we can ever get answers to those questions, and define the things which remain undefined; is to create a much more extensive Plasma Based Physics; rather than an Atom Based Physics.

We need a Universal Science not an Earth Science.” - Professor Robert Temple, in “We Need a Plasma-Based Physics Rather than an Atom-Based Physics We Need a Universal Science Not an Earth Science”, The Solari Report, 13 May 2026.

> ***“I am suggesting that we are all made of Plasma, and that our Physical Bodies are temporary vehicles for us to operate in the Physical World, for the short periods of time that our fragile bodies can permit.”*** *- Professor Robert Temple, in* ***“A New Science of Heaven How the New Science of Plasma Physics is Shedding Light on Spiritual Experience”****, 2022.*

99.9% of All Life-Forms Consist of Plasma

"First of all, it is matter. But it's it's not matter made of atoms. It has been conventional to say that there are 3 states of matter.

There's solid, liquid, and gaseous; that applies to atomic matter.

Physical matter is essentially atomic matter because of may being made of atoms, but we tend to say physical matter in conversation.

However much we may study physical matter, it doesn't mean anything in terms of understanding the universe.

Indeed, it leads you down a false path, because you come to assume, well, if that's what things are like here; that's what things are like everywhere.

Which is weak reasoning.

The all this Plasma is everywhere, and it's got these strong Electromagnetic forces, which are 10 followed by 35 zeros stronger than the so-called force of gravity. So, this is the background.

And and once you know this; how Universal Plasma Is; then you're not surprised when we start talking about Life Forms being Plasma Life Forms.

Because if 99.9% of the Universe Consists of Plasma, it follows by elementary reasoning that: 99.9% of Life Forms in the Universe are probably also Plasma Life Forms.

And this brings us back to us; are we really atomic life forms, or is that itself an illusion?

99% of the Universe is composed of Plasma rather than Atomic Matter.

In fact there are two gigantic clouds of plasma, called the Kordylewski Clouds, hovering between the Earth and the Moon.

Clouds of plasma are superheated states of matter where electrons are ripped from their atomic nuclei, creating a highly conductive, glowing fluid.

In space, these Electromagnetic "clouds" drive the Universe's most dramatic phenomena; from the Sun's coronal eruptions to the aurora borealis dancing over Earth's poles." - Professor Robert Temple, in "Future Science Series: A Conversation about Plasma", Solari Report, 5 May 2026.

The Fourth Phase of Water

"The existence of a Fourth Phase of Water; is not entirely unexpected.

The physical chemist Sir William Hardy argued for its existence; and many authors have found evidence for some kind of "ordered" or "structured" phase of water. Experimental evidence not only confirms the existence of that ordered, liquid-crystalline phase, but also details its properties. These properties explain why gelatin desserts hold their water. The energy for building this structure comes from the sun. Radiant energy converts bulk water into ordered water, building this zone. We found that all wavelengths, from Ultra Violet through visible, to Infrared can build this Ordered Zone. Near Infrared energy is the most capable. Water absorbs the infrared energy freely from the environment; it uses that energy to convert bulk water into liquid crystalline water. Hence, buildup of the fourth phase occurs naturally and spontaneously. Energy input beyond that occurring naturally creates additional liquid crystalline buildup. Of particular significance is the fourth phase's charge, commonly negative. Absorbed radiant energy splits water molecules; the negative moiety forms the building block of the ordered zone, while the positive moiety binds with bulk water molecules to form free hydronium ions. Adding more light stimulates more charge separation. This process resembles the first step of photosynthesis. In that process, energy from the sun splits a water molecule. Splitting is catalyzed by a hydrophilic chromophore. The process under consideration appears more generic: any hydrophilic surface may catalyze the splitting, some more effectively than others. The charges separated by light resemble a battery. That battery can deliver energy in a similar way as the separated charges in plants deliver energy. Plants, of course, comprise mostly water and it is therefore no surprise that similar energy conversion takes place in water itself. The stored electrical energy in water can drive various kinds of work, including flow. An example is the axial flow through tubes. We found that immersing tubes made of hydrophilic materials into water produces flow through those tubes, similar to blood flow through blood vessels. The energy derives from the radiant energy absorbed and stored in the water. Nothing more. Flow may persist undiminished for hours, sometimes longer. Additional incident light brings faster flow. This is not a perpetual motion machine: incident radiant energy drives the flow; in much the same way that it drives vascular flow in plants. This energy conversion framework is rich with implication for any system involving water, ranging from Biology and Chemistry all the way to Atmospheric Science, Engineering, and Health Sciences. The fourth phase can appear nearly everywhere. All that's needed is water, radiant energy, and a hydrophilic surface. The latter can be as large as a slab of polymer or tissue and as small as a dissolved molecule. The liquid crystalline phase inevitably builds — and its presence plays some integral role in the respective system's behaviour." - Dr G.H. Pollack, PhD in "The Fourth Phase of Water: A role in fascia?, Journal of Bodywork and Movement Therapies, October 2013.

Electrically Expanded Water: The Plasma Form of Water

"Electrically Expanded Water (EXW) is a negatively charged plasma with an added electron. It is water that has soaked up electricity which is bio-available.

A third gas is formed from an electrolyzer, which is the definitive difference between hydrogen as H_2 and Hydroxy or "Brown's Gas." Hydrogen electrolysers often have a membrane to separate out the ozone, chlorides and the Electrically Expanded Water. "Brown's Gas" generators so not, but have post-filtration to scrub out all but the Hydrogen, Electrically Expanded Water and the Oxygen. At the Water Conference 2019, Dr Gerald Pollack; asked George Wiseman: **Whether Electrically Expanded Water was the same as Exclusion Zone Water (EZ Water) with an added electron.** George Wiseman response to this specific point about Electrically Expanded Water (EXW), and Exclusion Zone Water (EZ Water):

1. Exclusion Zone isn't water (it's H_3O_2) a gel-like substance that excludes impurities. We should start calling it Exclusion Zone Gel. That's what Dr Gerald Pollack called it when speaking with me when I confirmed all the conclusions below with him.

2. Exclusion Zone gel isn't water. Water is H_2O. This substance is H_3O_2, and just because it's Made of oxygen and hydrogen does not make it water (H_2O). No one would mistake or call Hydrogen Peroxide (H_2O_2) for "water" (H_2O), so calling Exclusion Zone Gel (H_3O_2) "water" is incorrect.

3. Exclusion Zone Gel isn't the "fourth phase of water" (That was just a catchy title to a book). **The Actual Fourth Phase of Water is Plasma, Not Gel.** The gel could be called phase 1.5, (partway between solid and liquid).

4. Matter (water or H_2O) has 4 "major" states: Solid (ice), Liquid (water), Gas (steam or water vapour), and Plasma (Electrically Expanded Water or H_2O with added electrons. Exclusion Zone Gel (phase 1.5) is not anything like Electrically Expanded Water (phase 4).

5. Each "phase" of matter is achieved by adding energy. As you add heat, ice melts into water, then turns into steam and (adding electrons) then turns into Electrically Expanded Water. Nowwhere in that phase progression does the water H_2O turn into EZ gel (H_3O_2).

So the Statement "Exclusion Zone Water plus the added electron" is wrong on 2 counts:

1st EZ gel (H_3O_2 gel) is not "water" (H_2O).

2nd EZ gel is Nothing Like Electrically Expanded Water (negatively charged water plasma).

Wrong consistency (Gel versus Gas) and chemical formulation (H3O2) vs H2O).

6. What Electrically Expanded Water Does Do is provide the components (nutrition and energy) the body needs to Make Exclusion Zone Gel (H3O2). The body Uses Electrically Expanded Water to make Exclusion Zone Gel, But Electrically Expanded Water is Not Exclusion Zone Gel.

7. Exclusion Zone Gel is Needed in the body. It's how most of the Hydrogen, and Oxygen in the body is "structured" or "arranged"; Life just isn't possible without it. But saying that Electrically Expanded Water is EZ Gel is incorrect in almost every possible way." - in "Electrically Expanded Water - The Plasma Form of Water", Osmio, Water Conference, Bad Soden, Germany, 27 October 2019.

> ***"You're probably familiar with 3 States of Matter: Solids, Liquids and Gases, like; ice, water, and steam. Beyond Gases, there's another state of matter called Plasma. And it makes up 99.9% of the observable universe. This is completely different from plasma in our blood. We're talking about a state of matter, that's similar to a gas but with different properties. We actually don't see this kind of plasma very often on Earth, but when we do, it can be in beautiful and exciting ways. So it turns out that almost everything in our universe above an atmosphere altitude of about 100 kilometers, is a plasma. Some people estimate that 99.9% of everything in the universe is a plasma. The most significant source of plasma in our solar system is the sun. The sun is very hot, and it's a plasma. So we now know that plasmas can be found in Earth's atmosphere, the sun, and the lightning strikes of other planets. But where is this 99.9% figure coming from? You have to remember that space is really big, and so much of our universe isn't made up of planets or stars but is the really really vast spaces in between those objects. Most of interstellar space – the distances between solar systems – is full of hydrogen and helium plasmas. These interstellar plasmas are the result of exploded giant stars, millions of years ago. Overall, plasmas make up more matter than all of the solids, liquids, and gases in our universe combined. It's fascinating to look into the night sky and remember that the stars and the spaces between them are mostly made of this wild and energetic substance. On Earth, we're surrounded by solids, liquids, and gasses. And on a much larger scale, we're actually surrounded by plasmas. Our journey through this fascinating 4th state of matter started at some of the smallest particles, and ends with the vastest distances in our universe. And there's still so much to learn?"*** *- in "Plasma, Plasma, Everywhere!", NASA's Curious Universe, 9 August 2021.*
>
> *Please see: "The 4th Phase of Water", in Chapter 28 of this Book.*

Chapter 4

The Importance of Electro-Therapy

Electro-Therapy if this is thoroughly understood, we may do away with most other types of Treatment; besides: Hydropathy, Osteopathy, Chiropractic, Neuropathy.

Hydropathy, Osteopathy, Chiropractic, Neuropathy and Electro-Therapy; are those Therapeutics that Cover the Broader Field of Service to Men.

The Emunctologist, should thus know the usefulness, and the indications for Electro-Therapy.

The study of Chemistry combined with Electro-Therapy (the study of Vibration of Chemicals administered in same to the body through Specific Instruments), and as well the use of Hand Electricity.

But in order to not be confusing to self, there should be those who thoroughly study to understand Electro-Therapy, as to its place in clinical practice.

Thus, the Hospitallers Order of the Good News, makes available a Postgraduate Course in the Field of Electro-Therapy, for those Emunctologists, that aim to specialize in the Field of Electro-Therapy.

> ***"Theories may change, fads may come and go, but, the True, the Definite Indications of a Remedy Never Change. They Are the Same Yesterday, Today, and Forever."*** *- in "Clinical Medicine", 1919.*

Electricity as a Biological Function

"The Phenomena of Life, can and should be explained solely by the working of the physical forces, which control the material universe; and that among these Forces; Electricity plays a Predominant Part." - Ernest Solvay, in "The part played by Electricity in the Phenomena of Animal Life", 1896.

Of the Living Motor of the
Nature of the Living Motor

"Among the essential characteristics presented by the animal kingdom, one of the most striking is unquestionably the faculty of automatic locomotion, which has been called motivity.

The study of this distinctive quality leads us quite naturally to the most general consideration of the phenomena of life in their connected aggregate, so that we may conveniently take this as our starting point when we propose to unfold the part taken by the forces of inanimate nature in connection with the phenomena in question.

Since motivity is essentially inherent in the nature of the living animal organism, we may say that an Animal is a Motor; further than this, we have good reason to believe that an animal is an Electric Motor.

We see at the outset that motivity can not arise from a dynamic transformation of potential energy of the kind presented to us in a hydraulic motor.

Electricity lends itself to a satisfactory solution of the problem before us, a solution to which it will be well that we give our attention.

The glands, which represent apparatus composed of cells of great vital activity, also undergo rapid oxidation.

Internal oxidation is for us the source of electricity.

This process goes on chiefly in the muscles and in the glands; hence we give to these portions of the whole organic structure the name of electrogenic apparatus.

It is interesting to notice that the tissues which are the seat of most active oxidation, as the muscles and the glands, are richly provided with nerves, while those in which oxidation is feeble, as the cartilages and connective tissue are but poorly supplied by the nervous system.

Thus the readily oxidizable tissues, forming the electrogenic apparatus, would play the part of the negative plate, the fluids producing oxidation and hydration that of the positive plate; the nerves would serve to close the circuit.

We should thus recognize in the economy of the living animal the chemical duality necessary for the production of electrical energy; should we not, consequently, be justified in considering this organism as a true physiological battery?

If so, we ought to follow up the comparison, and try to understand how this battery works; what is the nature and what the extent of its circuit; what are the causes which make its discharge to vary, and finally, what becomes of the energy which it develops.

In what way does the propagation of Electricity in the Nerves take place?

To answer it there will be need for seeking first of all to complete our knowledge of the constitution itself of the nerve fiber, afterwards to study very closely the electro-physical properties of nerve tissue, to investigate under what influences its electrical resistance varies, to determine finally the nature of the process itself by which the nerve current is propagated toward the organs where it is utilized.

Manifestations of nerve action are always accompanied by variations of electrical condition.

Muscle and nerve respond to stimulation of mechanical, thermic, chemical, or electrical origin, but the last of these is attended with especially remarkable results.

Electrical influence is in fact by far the most powerful and extended in its effect, whether it be applied directly to the muscular tissue or, above all, if it be applied to a nerve.

These facts have a double bearing: they seem to justify the idea of attributing to the nerves the part of conductors, and show also that electricity is the form of energy which lends itself better than any other to propagation to a distance and to distribution in the living organism.

Assuming that the nervous system is not the producer of energy, but that its function is only to distribute it, must we not hence conclude that by means of its stimulating power it can modify, hasten or retard this distribution?" - Ernest Solvay, Belgian Senator, Chemist and Industrialist (in 1861 he along with his brother Alfred Solvay, developed the ammonia-soda process (Solvay process) for the manufacturing of soda ash (anhydrous sodium carbonate) from brine (as a source of sodium chloride) and limestone - as a source of calcium carbonate), in "Electricity in the Phenomena of Animal Life", Texas Medical Journal, March 1899.

Important Note Concerning Electrical Forces

> ***The Emunctologist should always bear in mind, the following guiding principle of life, in any physical body: For while Electrical Forces, are life in its activity, in man (save where they are to destroy the plasms that work upon the body itself), they are more helpful in the low form, than the high form.***

"This peculiarity which, together with other mostly unlooked-for properties of these currents I had the honour to bring to the attention of scientific men first in an article in a technical journal in February 1891, and in subsequent contributions to scientific societies, **made it at once evident, that these currents would lend themselves particularly to Electro-Therapeutic uses.**

With regard to the electrical actions in general, and by analogy, it was reasonable to infer that the Physiological Effects, however complex, might be resolved in 3 classes:

1. The statical, that is, such as are chiefly dependent on the magnitude of electrical potential.

2. The dynamical, that is, those principally dependent on the quality of electrical movement or current's strength through the body.

3. Effects of a distinct nature due to electrical waves or oscillations, that is, impulses in which the electrical energy is alternately passing in more or less rapid succession through the static and dynamic forms.

This mode of applying currents in Health Treatment appears to me to offer the greatest possibilities at the hands of the physician.

While investigation is being turned in what appears to be the right direction, **scientific men are still at sea.**

This state of things impedes the progress of the physicist in these new regions and makes the already hard task of the physician still more difficult and uncertain. The facts mentioned would make it reasonable to expect that this extraordinary effect which, I have already usefully applied, will likewise prove to be of value in Electro-Therapy.

The continuous improvement of the instruments and the study of the phenomenon may shortly lead to the establishment of a novel mode of Hygienic Treatment which would permit an instantaneous cleaning of the skin of a person, simply by connecting the same to, or possibly, by merely placing the person in the vicinity of a source of intense electrical oscillations, this having the effect of throwing off, in a twinkle of the eye, dust or particles of any extraneous matter adhering to the body.

When this is done, **nothing will stand in the way of an extensive and efficient application of this beautiful discovery which must ultimately prove itself of the highest value, not only at the hands of the surgeon, but also of the Electro-Therapist and, what is most important, of the Bacteriologist."** - Nikola Tesla, in "8th annual meeting of The American Electro-Therapeutic Association", Buffalo, New York, 13 to 15 September 1898, The Electrical Engineer, 17 November 1898.

Nikola Tesla Writes About His Experiments in Electrical Healing

Some weeks ago this journal published an interesting article concerning Electrical Oscillations as observed by the eminent scientist, Nikola Tesla.

So much interest was shown in the subject that Mr Tesla was appealed to directly and in response he sent this letter:

"The many pressing demands which have been made upon me in consequence of exaggerated statements of the journals have painfully impressed me with the fact that **there are a great many sufferers, and furthermore that nothing finds a more powerful echo than a promise held out to improve the condition of the unfortunate ones. A great many communications have been addressed to me by physicians. To these chiefly this brief statement of the actual facts is addressed.**

Some journals have confounded the physiological effects of Electrical Oscillations with those of mechanical vibrations, this being probably due to the circumstance that a few years ago I brought to the attention of the scientific men some novel methods and apparatus for the production of Electrical Oscillations which I learn, are now largely used in some modification or other, **in Electro-Therapeutic Treatment. To dispel this erroneous idea,** I wish to state that: **the effects of purely mechanical vibrations which I have more recently observed, have nothing to do with the former.**

Mechanical Vibrations have often been employed locally with pronounced results in the Treatment of Diseases, but it seems that the effects I refer to have either not been noted at all, or if so, only to a small degree, evidently because of the insufficiency of the means which have eventually been employed in the investigations. While experimenting with a novel contrivance, constituting in its simplest form a vibrating mechanical system, in which from the nature of the construction the applied force is always in resonance with the natural period, I frequently exposed my body to continued Mechanical Vibrations.

As the elastic force can be made as large as desired, and the applied force used be very small, great weights, half a dozen persons, for instance, may be vibrated with great rapidity by a comparatively small apparatus.

I observed that such intense mechanical vibrations produce remarkable physiological effects.

They affect powerfully the condition of the stomach, undoubtedly promoting the process of digestion and relieving the feeling of distress, often experienced in consequence of the imperfect function of the organs concerned in the process.

They have a strong influence upon the liver, causing it to discharge freely, similarly to an application of a catharic.

They also seem to affect the Glandular System, notably in the limbs; also the kidneys, and bladder, and more or less influence the whole body.

When applied for a longer period they produce a feeling of immense fatigue, so that a profound sleep is induced.

The excessive tiring of the body is generally accompanied by nervous relaxation, but there seems to be besides a specific action on the nerves.

These observations, though incomplete, are nevertheless positive and unmistakable, and in view of this and of the importance of further investigation of the subject by competent men I prepared about a year ago a machine with suitable adjustments for varying the frequency and amplitude of the vibrations, intending to give it for investigation.

This machine, together with other apparatus, was unfortunately destroyed by fire a year ago, but will be reconstructed as soon as possible." - Nikola Tesla in "Detroit Free Press", 16 February 1896.

> ***"Electricity is an Extremely Valuable Therapeutic Agent, especially when utilized in connection with Hydrotherapy, Thermotherapy, and other Physiologic Methods.***
> ***In connection with other physiologic measures this agent is capable of securing most excellent results."*** *- Dr John Kellogg, MD in "The Battle Creek Sanitarium System", 1908.*

For further information on Electricity as a Biological Function, please read the Book: "Neuropathy Principles & Foundations of the Neuropathic Treatment", 2025.

Electricity and Life

"Scientific progress during the past 3 decades has perhaps surpass that of all preceding ages; but we are still in the kindergarten class when we compare what is known with that which is still to be discovered.

Of course there is nothing super-natural in the strict sense of the term, but many things remain unknown, although science is daily uncovering new and hitherto undreamed-of marvels.

There exist Great Cosmic Forces of which we still know but little.

Gravitation is one of these; we know something of its laws and the results of its action, but nothing whatever of its real nature.

Electricity is another; of this we know somewhat more, and we now recognize it in a variety of forms, as light, heat, chemical action, magnetism, etc., but its true nature is still a deep mystery.

Life-Force or vital energy is another great Cosmic Principle; thru its action electrons are formed into atoms, atoms into molecules, molecules into crystals and chemical compounds, and these into the bodies of plants, animals and of man.

We have no name for this force, but thru its action the great Cosmic Scheme of Evolution goes on.

In India they call it by a Sanskrit name - Prana.

Here in the Occident we have not yet officially recognized this force; it is quite unorthodox to even suggest that it exists - simply because we have not been able to measure and record it by our still comparatively crude laboratory instruments.

A few years ago, we believed in nothing but matter and force; today science recognizes the necessity of a third basic principle, Intelligence or Mind, without this we can satisfactorily account for none of the facts of the world in which we find ourselves.

Its manifestations in matter thru the Cosmic Forces give us at least a working hypothesis of life.

As Electricity has been the great field for the investigations of the past century so will the nature and manifestation of the Life-force be the source of the discoveries of the future.

Even today we may hazard a few statements regarding this hypothetical Prana or Life-force.

For example, it comes to us - **like all other active forces from the Sun.**

It is stored and transmitted by plants and by the oxygen of the air, and in the human body it appears to be distributed thru the great Sympathetic Nervous System to every organ and tissue of the body.

The Sympathetic nerves radiate from the Solar Plexus - our Sun-center.

If bacteria or poisons interfere with this circulation, as for example in infantile paralysis, the muscles from which the supply of life force is cut off, lose their power of reaction and wither away.

It is in this connection that we may study the action of certain electric currents as applied to the treatment of disease.

It would seem that certain types of alternating currents of high frequency and voltage greatly facilitate the distribution of this vital principle (Nerve-Force: Prana), and this explains the action of one of the most valuable of recent medical discoveries.

Nikola Tesla described in a magazine article the remarkable effects upon himself and his assistants resulting from their exposure to the action of alternating currents of exceedingly high-voltage and frequency during some research work.

He prophesied that when electrical oscillations were fully understood and applied by physicians that a universal healing agent would have been obtained - one which would so increase the vital energy and resistive reaction of the human body as to enable it to throw off disease.

The present writer, acting on this hint, constructed a high-frequency apparatus, tested it on a number of patients and reported his results to a local medical society in 1895.

So far as can be learned this was the first clinical work ever done with the Tesla current, altho d'Arsonval in Paris was then experimenting with his relatively low voltage currents, produced from 3,000 cycle alternators.

Later Apostoli, Denoyes, and others reported remarkable results from the currents induced in the bodies of patients placed inside of huge solenoids or wire coils thru which high frequency currents were passing.

The effects obtained were: increase of strength, appetite and weight, induction of natural restful sleep, and increase in tissue combustion and elimination.

Early in 1895, the author devised the first Vacuum Electrodes for applying Tesla currents to the patient.

Today thousands of physicians are using this device, often mis-calling it the Violet-Ray Treatment. This is of course a misnomer, the violet light in the tube having nothing whatever to do with the healing effect produced by the transmitted electrical oscillations.

Some years ago the great Swedish scientist, Arrhenius, was reported to have subjected one-half of a class of school children to the action of high-frequency currents, 1 hour daily for several months, at the end of which time, there was marked increase in the average growth, weight, general health and mental ability in the electrified pupils as compared with those not so treated.

High-frequency currents are actually being used in truck-gardens to promote the growth and increase the size of vegetables.

The high-frequency currents, in short, act as vitality boosters - no other form of electricity will do this. **Galvanism, Faradism, Static electricity are all valuable agents in the hands of the Electro-Therapeutic Specialist,** but they have little direct action in **promoting cell vitality and growth, as do the high-frequency currents when properly applied.**

Authorities explain the action of high-frequency currents in various ways, the favourite theory being that the healing effect is due solely to the liberation of heat in the tissues.

It is perfectly true that in many diseases the heat liberated in the body by the passage of from 400 to 2,500 milliamp-peres at a frequency of about one million cycles, **is an important agent in promoting an artificial inflammatory reaction and increasing circulation.**

The heat is, however, only one of the secondary forces generated by the current; there are many other factors in the vitalizing effect.

The thermic theory will, for example, not explain the increased growth of plants produced by the action of high-frequency currents of very high voltage and low amperage.

In medical practice often the most marked results are obtained by the use of Tesla currents of low intensity, but of exceedingly high potentiality.

The author can account for these effects only on the theory that these currents, when of proper frequency, are synchronous with the normal rate of sympathetic nerve vibration, and in this way increase the flow of the Pranic force thru which function and tissue growth are maintained.

High-Frequency Currents are now extensively used by the medical profession **to increase cell growth, metabolism and functional activity.**

They tend to normalize the blood pressure and are the only agents that are of real curative value in certain stage of Arterio-sclerosis (hardening of the arteries).

They greatly augment the defensive powers of the organism, enabling it to resist and overcome disease-producing agencies.

The prejudice against high-frequency currents on the part of many physicians may be attributed to the fact that they do not employ proper technique, or that they use an apparatus which does not admit the proper variation of frequency, amperage and voltage, in order to suit the requirements of the individual case." - Dr Frederick Finch Strong, MD, Lecturer on Electro-Therapeutics Tufts Medical School, Boston, in "Electricity and Life", Electrical Experimenter, March 1917.

> ***"Healing with the Clean Pure Beautiful Agents of Nature, is surely the one method of all which appeals to most of us, and deep down in our inner self, surely there is something about it that rings true indeed — something which tells us, this is Nature's way and is right. To Nature we look confidently for all the needs to keep us alive: Air, Light, Food, Drink and so on."*** *- Dr Edward Bach, MD, in "Wallingford Lecture", 1936.*

Life Without Light Is Impossible

"The Wonders of Electricity, might just as well be stated as: The Wonders of the Universe.

What is Electricity?

Most scientists now agree that: **Electricity is a substance composed of moving electrons, and made manifest to us by its magnetic, thermal, photic, and chemical effects.**

There is evidence to believe that:

The Electron Is The Prime Cause of All Life, and Energy.

The human body is the most delicate and complex apparatus.

Within its structure are contained electric generators, transformers of potential into kinetic energy, trillions of minute cells constituting minute batteries, surrounded and containing electrolytes containing cathions and anions.

Everything Has An Electrical System

Everything that lives; whether animal or vegetable has a well defined electrical system.

There is much evidence to show that: L**ife Without Light Is Impossible.**

In fact, all energy on this earth is derived from our sun, and solar irradiation is electromagnetic radiation, or electricity. **Solar Energy taken into the body becomes converted through biochemical changes into living processes.** Since chemical changes are due to and synonymous with electrical activity, then it follows that **without electricity there is no life.** Physiologists, are rapidly coming to the belief that **all living substances are electrically controlled and electrically driven. The wonders of electricity then, are the wonders of the universe; the wonders of life and death. Is it then, at all surprising, that the first chapter of the Bible should contain this command from the Supreme Source of All Energy:**

> ***"And God said, Let there be light: and there was light."*** *- Genesis 1:3*

." - Dr E. N. Kime, MD, in "The Wonders of Electricity", The American Journal of Physical Therapy, December, 1929.

> ***"The Effects of Sunlight as Essential to the Sustaining of Life, and the Curing of Disease are Undoubted. We now know Sunlight consists of the following light rays: Infra-Red, Red, orange, yellow, Green, Blue, violet, and Ultra-Violet."*** *- Dr Louis Feldman, MD, in "Actino or Ultra Violet ray Therapy", Principles of Physiotherapy in General Medicine, The American Journal of Physical Therapy, July, 1929.*

Life Is Electrical Energy

"Life is the result of bombardment of electron against electron; ion against ion; the quotient of never ending reversal.

This thing we call life is the summation of positive and negative.

The negatives are whirling at incredible speed around the positive in orderly, if eccentric orbits.

Life Is Electrical Energy; at least what we call electrical energy, without in the least really understanding what electrical energy is.

In this view science limits itself to the purely physical explanation.

We are no nearer the secret of creation, than at any other time, and the very complexity of each new discovery, makes it more difficult to understand creation.

What we can, and do say, is that **the assumption of the part which electricity plays in this thing called life, enables us to combat human ills a little better.**

The universe may be considered as filled with revolving, and possibly electrically propelled worlds, which range from the super solar system down to the ion.

All these things have a bearing on the new medicine.

The physicist and the physician must cooperate.

Physicists must learn to convey the facts known to them to the physicians, and some physicians must learn to translate, as it were, the fruits of the pure physicist into the field of physiology, of living matter in health as well as in disease. The world will be a better place to live in.

The concept of invisible ultraviolet sunlight into vital rays should not be ignored.

The "Light which shineth in darkness" - John 1:5, should be recognized and the effects of its vital portions sought to advantage by all." - Dr Herman Goodman, MD, in "The Light Which Shineth in the Darkness", The American Journal of Physical Therapy, June 1929.

Ionization

"In addition to its own physical action, Physiotherapy, and especially Galvanism, affords an excellent method. This is, indeed, one of the first and oldest uses of galvanism in medicine. **Medical ionization still remains one of the most valuable employments of electricity; and with our advanced knowledge of this agency, and our improved apparatuses for generating and applying it, ionization should have a wider and more effective field of usefulness than ever.**

Moreover, **with our present conceptions of chemical structure and chemical action, which no longer regards the Atom but the Ion, as the unit of these substances, and Ionic Association and Disassociation as their mode of activity, it would seem as though there should be a wide field for Research into the Chemico-Physiological Inter-Reactions Between the Various Radiant Energies."** - in "The American Journal of Physical Therapy", April, 1929.

Galvanism and Its Uses in Healing

"The Galvanic current is said to be the Grandfather of the electrical currents.

It is one of the oldest medical currents.

With the advent of the newer currents, as Diathermy (the use of high-frequency electrical currents, or electromagnetic waves to generate deep heat in body tissues; promoting increased blood flow, reducing pain, relaxing muscles, and speeding recovery for musculoskeletal conditions: sprains, strains, arthritis, and chronic pain), Ultra-Violet, and Infra-Red, it has been to a certain extent, forgotten. It is, however, a valuable form of physical therapy, and has many good uses. It is a constant or direct current, that is, it flows in one direction only.

It possesses a Positive, and a Negative pole (polarity), and it flows from Positive to Negative. This is important to remember when using it for treatment.

When this current is applied to the human body its action is chemical.

The body may be compared to a large sac filled with fluid, which fluid contains the various salts of the body. When this current is applied, due to its chemical action, it splits up these salts into their different constituents, the metallic portion being attracted to the Negative Pole and the acid portion being attracted to the Positive Pole. This redistribution (movement of ions), causes tissue changes, and is summed up in the word Metabolism.

To Test for Polarity: Place both Positive and Negative Poles in a glass of water; the one that begins to throw bubbles (Hydrogen) first is the Negative Pole. Both the Positive and Negative Poles of the Galvanic current have definite properties, upon which we depend for our results.

It is the chemical current used in medicine. The Positive Pole accumulates acids, is vasoconstrictor, it hardens , and shrinks tissues. It also dries and dehydrates. It is soothing and sedative. It repels metals and alkaloids. While the Negative Pole may be said to do the opposite. It attracts alkalies. It is a vasodilator, it is softening to tissue, thus giving it a tendency to cause hemorrhage. It breaks down tissues. It is irritating and liberates hydrogen. It liberates the halogens.

These effects are always the same, no matter where and how galvanism is obtained, whether from dry cells or electrical machines.

In applying this constant current, therefore, to a pathological condition, it is very important to use the correct pole. As an illustration, take an endocervicitis; here the cervix is swollen, edematous, congested, with a stringy discharge from the mucous membrane. We know the positive pole shrinks tissue, hardens and dries, just the effect we are looking for in the inflamed cervix.

This, therefore, is the pole to use in treating this condition.

There are many conditions where galvanism can be used.

This can be done with the galvanic current, because the drug is forced into immediate union of the protoplasm of the inflamed cell.

A condition where medical ionization can be used is in a hypertrophied or ankylosed joint. The iodine ion should be used here.

To soften scar tissue the iodides, or the chlorides can be used. In a rheumatic joint, the salicylates can be driven in. The flooding of a part with a drug is lessened, however, if the circulation is active, and if the skin is sensitive.

Medication by mouth, and ionization to a pathological area, will certainly hasten recovery. It is held by many men that deep medical ionization is impossible, and that only in the superficial layers of the skin can the driven in drug be found. Personally, I am of this same opinion. The positive pole drives in metals, as silver, copper, and the alkaloids. The negative pole drives in the halogens, as Iodine. As a pain reliever, especially in some sciatica neuritis, the galvanic current was the only therapy that gave relief. The positive pole was applied to the back and the negative to the foot. Besides the galvanic polarity effects, there is also an increase of temperature between the pads, probably a frictional effect upon the cells from the passing of the electric current. Such an increase in temperature leads to an increased blood supply, and as such, increased nutrition and cellular activity can be expected. The best results are obtained with the galvanic in the chronic cases.

Another most important use of the galvanic current is in the wave form, for the use of paralysis. In peripheral paralysis our main dependence is upon exercise and Massage. As you know, if a nerve is completely degenerated there will be no response with the Faradic current.

The Galvanic, however, offers hope, as the muscle will respond to an interrupted galvanic current, thus giving it a chance to keep from growing flabby and atrophying from nonuse. When the galvanic current is made to pass through a nerve and muscle preparation the muscle contracts at the instant the current begins to flow, and again at the instant it is interrupted. During the time the current is flowing no muscular contraction is produced.

Therefore, only the change in the intensity of the current from moment to moment is stimulating. Galvanism, therefore, is an excitor and stimulator of neuromusculature tissue. It, therefore, does what Faradic and other induced currents cannot do, in dealing with atrophy and wasting muscle incident to peripheral nerve injury.

Bearing the Positive and Negative effects of the poles in mind in the waveless form, it is understood that this current has various uses, and briefly may be said to:

1. Introduce drugs into the system (ionization)

2. Relieve fatigue by removing waste products through, changes to and fro of the ions in the tissues (Metabolism).

3. Alleviate pain through sedative effect, upon sensory nerve endings.

4. Destroy tissue.

5. Reduce hypertrophic tissue.

6. Produce muscular contraction when used in the interrupted form.

7. Allay various inflammatory states.

8. Relax and break down adhesions." - Dr N. J. Seybold, MD, in "The American Journal of Physical Therapy", April, 1929.

Clinical Applications of the Diathermic Treatment in Gastrointestinal Conditions

"Clinical applications of the Diathermic Treatment in Gastrointestinal Conditions. Interesting results have been published by many authors.

Their indications may be stated in the following manner:

I. Diseases in which painful phenomena are prevalent, such as:

1. gastralgy and gastric attacks (Tabes).
2. painful dyspepsy and gastritis.
3. solar syndrome.
4. chronic appendicitis.

II. Spastic conditions such as:

1. cardiac spasm.
2. nervous pyloric spasm in adults.
3. pylorospasm of the newborn.
4. aerophagy.
5. nervous vomiting.
6. spastic constipation.

III. Conditions having a secretory origin such as:

1. Hyperacidity chronic gastritis.
2. Certain cases of gastric and duodenal ulcers.
3. Mucous colitis.

IV. The phenomena involved in peritoneal inflammations:

1. Epiploitis,
2. Perivisceritis, and
3. Adhesions, are favourably influenced by diathermy.

A man aged 56 was brought in March 1927, to the Hotel-Dieu Hospital in Lyon, France, to be treated for a stomachal disease (pyloric cancer suspected).

In 3 months he had lost 20 kilos, appetite and strength. Then appeared epigastric pains, occurring daily after the 2 principal meals, and more recently vomitings which came periodically and calmed the pains. The symptoms increased little by little in gravity till the man was brought into hospital.

He could scarcely eat anything. He became so weak that he could hardly speak, suffered continually though not excessively, and continued to vomit.

A complete examination revealed neither tumor nor pyloric obstruction.

The patient was put under my care in order to try the application of a diathermic treatment on the stomach. From 8 to 15 March, I gave him 8 treatments according to the ordinary direct method, that is: a tinfoil epigastric pad (10x20 cm), another pad (15x25 cm) on the dorso-lumbar region.

A current of 600-1,000 mA intensity was given during 15 to 30 minutes.

After the 4th treatment the man felt an amelioration. Pain was lessened, vomitings became less frequent, and the appetite reappeared. After the 7th treatment, his strength revived, his appetite was considerable, pains were insignificant and vomitings absolutely ceased. When the patient left the hospital, 10 days later he declared himself completely cured. He had gained 5 kilos in 3 weeks, and **all symptoms had disappeared.** Two months after he had left the hospital, the man had gained 12 more kilos. There only remained a slight degree of physical weakness. In August, 3 months later, I heard from his doctor who wrote to me: **"Is now perfectly well; he has gained his normal weight, and offers no more symptoms. The clinical examination is negative".**" - Dr A. Mirimanoff, MD, Geneva, Switzerland, in "The Influence of Diathermy on the Gastro-Intestinal Tract", The American Journal of Physical Therapy, April, 1929.

Lighting and Its Effects on Behavioural Problems

"During the 1972-1973 school year the Environmental Health and Light Research Institute of Sarasota, Florida, undertook a study of the Effects of Lighting on Behavioural Problems of first grade students. In a pilot project conducted in 4 windowless elementary classrooms. Children **showed dramatic reactions to an Improved Lighting Environment.**

Under their Normal Classroom Lighting, some first graders in the study Demonstrated:

1. **Nervous Fatigue**
2. **Irritability**
3. **Lapses of Attention**
4. **Hyperactive Behaviour**

After Full Spectrum Lighting was installed, with lead foil shields over the cathode ends of the fluorescent tubes to stop suspected soft X-ray, and an aluminum screen grid over the entire fixture to stop known RF radiation, which is characteristic of all fluorescent tubes, **a marked improvement appeared in the youngsters. Without any use of drugs, the first graders settled down and paid more attention to their teachers. Nervousness diminished and teachers reported that overall classroom performance improved."** - in "Ecologic-Biochemical Approaches to Treatment of Delinquents and Criminals", 1978.

The Importance of Sunlight to Health

"The Recognition of the Dependency of Health on Sunlight is part of the inherited experience of Mankind.

We are now gaining more exact knowledge of the nature of this relationship and the conditions which influence it.

The beneficial effects of exposure to the Sun's Rays have been demonstrated in such diseases as Surgical Tuberculosis, and Rickets, and the result is seen not only in the direct effect on the obvious disease, but in a general stimulation of body growth.

The Importance of Sunlight to Healthy Growth is increasingly realized and the rearing of healthy children requires that they should not be deprived of what is so essential to their well-being." - Chief Medical Officer, Ministry of Health of England, in "Annual Report on the State of the Public Health", 1927.

Sunshine Is An Important Biodynamic Agent

It promotes:

1. Anabolism
2. Transpiration
3. Respiration
4. Increases the percentage of Hemoglobin

The Blue and Ultraviolet Rays of Sunshine:
Exert a bactericidal effect on pathogenic bacteria, and a Tonic, Vitalizing Influence on the Feelings.

Colourless Daylight:
Is superior for visual efficiency and Eye Health.
Dark clouds have a Depressing, Devitalizing Effect.

Humidity:
Increases the solid, poisonous, bacterial contents of the air, aggravates various pathological conditions of the body, reduces the sensitivity of some sense organs, and depletes the vital potential.

Fogs:
Increase the inaccuracy of mental work, the prevalence of diseases, and augment the death rate.

Clear Dry Days:
Are anabolic in character and thus produce a superabundance of energy.

Liefman concludes that **Darkening of the Atmosphere of Cities is Injurious to Health in 3 ways:**

1. An exciting impulse which influences our disposition is weakened and the energy of metabolism, especially as it concerns respiration, is diminished.

2. The illumination and warming of the earth, the water and the air within the precincts of our great cities is diminished, and in this way a series of hygienically important processes is influenced or depressed.

3. The chemical and bactericidal effect of the sun's rays is decreased and thus bacteria, especially the pathogenic ones, are permitted to thrive. (Wellow Inst. Bull., No.9)

> ***"Smoke is harmful by its power to absorb light directly, and by its effect in the formation of clouds and fogs which are peculiarly fitted to absorb the Blue, the Violet, and Ultra-Violet Rays, these being the Rays that are especially Germicidal. Diminution of Sunshine causes an increase of bacteria in the atmosphere. Sunshine has a direct influence on the Human Skin, as well as upon the Mental State."*** *- Sir William Ramsay*

Vision, Illumination & Ultra-Violet Rays

Cutting off Sunshine, and sky-shine (clouds reflect light), makes it necessary to use artificial light with its detrimental effect on vision.

Smoke acts as a curtain, and cuts off the Sun's direct Rays, **Ultra-Violet Rays which are Necessary for the Healthy Development of both Plants and Human Beings.**

Rickets, Anemia, and Tuberculosis are likely to Develop in children who are Deprived of Sunlight.

Sir John Robertson, C.M.G., Medical Officer of Health, Birmingham, in his Annual Report for 1926, dealt at length with the **smoke nuisance and its effects, and said that the extent to which the products of Combustion are in the Air of any large city, and its influences:**

> ***"It is Prejudicial to Health and it Limits the Growth of many Plants."***

By far the most important of these, is the fact that all smoke or dust in the air shuts out, in direct proportion to its amount, the ultra-violet rays, and prevents them from reaching the dwellers in the area.

> ***"The absence of these rays for the greater part of the day lowers vitality, and by so doing renders most people susceptible to ailments which they themselves would not associate with the absence of Sunlight. This deleterious effect, is for the most part produced by the very light and minute particles of soot which are carried high up in the air, and form by their presence an effective barrier to the sun's rays. It is possible to demonstrate this even when with unaided eyes the sun looks clear over the city."***

McCollum of Johns Hopkins, **has shown that the Growth Producing Factor, Vitamin A, and the Anti-rachitic Factor in Cod Liver Oil, are Not The Same and the latter has been designated Vitamin D.**

Respiratory Diseases

The inhalation of carbon particles, irritating fumes, and other atmospheric impurities irritate the mucous membrane of the nose and lower its resistance, thus rendering it liable to acute and chronic infections which may involve the ear. Irritation alone can produce congestion of the mucous membrane, secondary swelling of the turbinates, and vacuum frontal sinus headaches.

Patients in whom the membranes are diseased, and the ciliated epithelium destroyed, have great difficulty in eliminating the irritating particles and are therefore more sensitive to atmospheric pollution. In addition to this there is no doubt that some patients can be sensitized to certain forms of Air Pollution with the usual Allergic Manifestations. According to Doctor Henning of Leipzig, enlargement of the tonsils is common in firemen because of the irritating effects of smoke. Redness and congestion of the pharynx and larynx and tendency to inflammation of these tissues are predisposed to by Atmospheric Pollution.

Effect of Air Pollution on the Lungs

> ***"During periods of winter fog owing to certain barometric conditions and absence of wind, smoke cannot get away but accumulates in the lower air strata. As a consequence the proportion of impurity is enormously increased and the concentration of sulphuric acid in the air may be such as to cause irritation of the eyes, nose, and respiratory passages. It is a common experience of local medical practitioners to find their bronchitis patients dying in numbers during prolonged periods of winter fog. I would like to invite attention to a very striking correlation which emerges from a comparison of health statistics for the year 1926 with previous years. The general death rate for the year (12.5 per 1,000 living) is the lowest ever recorded for Salford. The greatest reduction of mortality occurred in the great group of Respiratory Diseases, and this fact associated with the occurrence of the prolonged coal dispute and consequent relative purity of our atmosphere, is a matter of some significance."*** *- Doctor H. Osborne (Medical Officer, 1928)*

H. K. Kugel, Acting Commissioner of Smoke Inspection, Cleveland, writes that the survey made by the Mellon Institute several years ago in Pittsburgh seemed to show that in certain **parts of the city which were the smokiest, diseases of the respiratory tract were much more numerous.**

It is interesting to note that the Annual Death Rate from Pneumonia is greater than from all other infectious diseases combined.

Smoke Irritates the Mucous Membrane, and predisposes to Diseases of the Respiratory Tract, especially Pneumonia.

Taylor says, as a result of inhaling about 35 lbs. of air daily, dwellers in the industrial cities have lungs more or less similar to those of the coal miner, not pinkish in color like those of a child or one who tills the field, but blackened, both on the surface and in the depths, due to the deposit of carbon. The tarry matter and the less visible sulphur acids which are far more dangerous than the carbon, set up an irritation in the mucous lining of the windpipe and smaller tubes. **Chronic Catarrh supervenes.**

The mucous lining becomes rough and thickened, the surrounding tissues lose their elasticity and become leathery in texture. These changes produce symptoms of **Chronic Bronchitis, symptoms resulting from persistent irritation, partial collapse of the lungs, and incomplete Oxygenation of the blood.**

> *Dr W. A. Brend has examined the main factors which might be held to account for a high rate of infantile mortality and finds that differences: "Neither in poverty, bad housing, insufficient feeding, defective sanitation, disease, industrial occupation of women, nor malnutrition of mothers can be regarded as adequate to explain the* ***excessive and widespread Difference between Urban and Rural Rate of Infant Mortality."***

Dr Stevenson believes that chances of survival differ but little at birth in town and in the country, but the **noxious influences of the former soon come into play, and make themselves felt to an increasing extent as the first year of life progresses, and to a still greater extent in the second and third years.**

Brend believes that the noxious influence is "a smoky and dusty atmosphere, and that as a cause of infant mortality it transcends all other influences", and if **one of the main effects of soot (impure carbon particles) is to cause Bronchitis, and lower the resistance of the respiratory organs,** then his argument is borne out by such figures as these:

Roughly 1/12th or all the deaths in England and Wales are due to respiratory diseases.

In Manchester the respiratory death rate is twice as great. For all rural England the Infantile Death Rate for 1928 due to Pneumonia and Bronchitis was 8.8, for the county boroughs 16.27, and for Manchester 23.16." - in "Effects of Air Pollution on General Health", Bulletin of the New York Academy of Medicine, September 1931.

The Influence of Ultraviolet Light Upon Circulation

"The effect of the universal arc-light-bath (also that of the sun-light acting as a climatic factor), upon the principal functions of the human body.

Evidence has been brought forward to show, that tile minute volume (output per minute) of the heart at rest in the sitting posture is a function of the respiratory metabolism.

Independent of variations in the metabolism the minute-volume as well as the output per beat is influenced by the arc-light-bath.

The primary effect (on the next 2 or 3 days), of the light-bath is in almost all cases an increase in the blood-flow." - in "Concerning the Influence of Ultraviolet Light on the Circulation in Man", Skandinavisches Archiv Für Physiologie, 13 February 1913

The Usefulness of the Treatment of Electro-Therapeutics

"Those who aspire to Mastership in Electro-Therapeutics will not be content with the mere attempt to relieve symptoms; they will seek to study those most complex and subtle diseases for the treatment of which electricity is indicated;

They will resort to this force for diagnostic as well as therapeutic aid;

They will strive to know not only how to use it, but, what is more difficult, how not to use it.

He only can reap the full and rich harvest of Electrotherapeutical Science, and art who sows beside all waters.

He must become proficient in Neurology, in Electro-Physics, and in Electro-Physiology.

He who has a knowledge of the Laws of Animal Electricity, and the Actions and Reactions of Franklinic, Galvanic, and Faradic Electricity on the Brain, Spinal Cord, and Sympathetic; on the Nerves of motion and of common and special sense; on voluntary and involuntary muscles; on the skin, and on all the various passages and organs of the body in health, and also of the electro-conductivity of the body.

Will find the paths of Electro-Diagnosis, and of Electro-Therapeutics illumined at every step by such knowledge, and will, in the end, make more correct interpretations of disease than he who merely holds electrodes on patients without any higher aim; and more than that, he will be introduced into a field of thought and experiment (a field surpassingly rich and fruitful), and lying in close relation to all departments of Physiology, of Pathology, and of Biology, where he can study science for its own sake." - Dr G. M. Beard, MD; Dr A. D. Rockwell, MD, in "A Practical Treatise on the Medical and Surgical Uses of Electricity", 1883.

The Effects of the Diathermy Current

"Diathermy is used in 2 distinct forms:

1. To Conserve Tissue, and restore organs to their primary function; and
2. To Destroy Abnormal Tissue.

The first effect of the Diathermy Current, is to create a rise of temperature, and a hyperemia in the tissues under treatment.

This induces improvement in the circulation, and influences beneficially the surrounding structures to a limited degree.

In the Treatment of Certain Forms of Deafness by Diathermy we are able to accomplish results which cannot be achieved in any other way, 5 to 15 minutes application should be made-according to the effect produced.

As a rule improvement in hearing should be noticed in from 6 to 8 Frequent Treatments, and then it is advisable to extend the periods, being guided by measurements of hearing acuity.

When the limit of improvement has been reached the applications should be continued once a week; once in 2 weeks, or once a month, to insure permanence.

We do not always confine our Treatments to Diathermy alone.

In many cases Electrical Massage, by means of the Sinusoidal Currents is helpful, or Mechanical Massage with an Electro-Vibrating Apparatus (to apply vibrations to the external auditory canal).

My preference in most cases is the Surging Sinusoidal Current used for 3 to 5 minutes after Diathermy." - in "Diathermy in Otolaryngology", The American Journal of Physical Therapy, June 1931.

A Note on the Treatment of Diathermy

The Treatments of Diathermy are most helpful to the body, from 30 minutes to 1 hour, once a week.

These will allow the electrical forces, from the low form of electrical vibration, to become more effective with the circulatory forces of the body, thus making for the better general conditions.

Thus, Diathermy Treatments, can change the axes of the whole system as to make for the Proper distribution of energies, that will aid to overcome some conditions.

Diathermy can be applied to several body areas, including the Cerebrospinal System, and to the trunk portion of the body.

Diathermy should not be given of too high a frequency when it is applied, rather the Low than the high.

Concerning Light Vibration Diathermy

Light diathermy: These should be applied, not for long periods, but for periods of 2 or 3 days at the time.

These Treatments can be taken 2 or 3 days, then rest from same 2 or 3 days or a week, and then applied for 2 or 3 days more. Then have a rest period, and then apply again. Not the heavy but the Light Vibration; not too great an amount of current or quantity used, but the light.

After the 3rd, 2 to 3 day period of treatments, begin with the General Massage over the system; given in a Neuropathic nature, rather than Chiropractic or Osteopathic. Give these for periods of 2 to 3 weeks. Begin in the central portions of the body along the Cerebrospinal System, and follow out the nerve plexus of the 9th dorsal to the lower extremities, also to the upper extremities.

These would work either way from the central or middle portion.

The reactions of these for the body will be to make for the less tendency for acidity in the system, that becomes a hindrance to the body in the proper assimilations; making for better eliminations through the alimentary canal, through the activities of the hepatic circulation, through the general respiratory system and the activities of the digestive forces themselves.

These can be keep for periods of 2 to 3 weeks, then have a rest period from same for a period and then begin again.

Diathermy Treatments can be applied to those centers that will make for increasing the circulation; or the 3rd and 4th dorsal center, and the lacteal duct, or the umbilicus center. In regards to Deep Diathermy Therapy in pelvic organs, by changing the vibrations first, will make for electrical vibrations through same. Then the Massage will make for greater corrections in all functionings.

In the application of those forces in the Diathermy, that produce for the body the opening of the flow of effluvia, or of the blood supply and the lymph circulation, through those portions above the liver area, and the kidneys, and lumbar plexus. This applied for 10 to 15 minutes, about 3 times each week.

It is of benefit, that the days that the Diathermy Treatment is taken, After the Diathermy Treatment there should be applied the Corrections, and Manipulations, Osteopathically.

Electricity Is To Fill A Great Place In The Future

"For the relief of the large class of unfortunates (health conditions) included in this section of our journal, it is a recognized fact that the physical measures-Electricity, Oxygen, Hydrotheraphy, Therapeutic Exercise, and the various appliances for support-afford the chief means of relief. For the treatment of deformities, congenital or acquired, adapted appliances, with Electricity and Exercise to Maintain the Nutrition of the Parts, meets the requirements of a very large class.

Surgery is required in others, but must always be supplemented by some of the above measures. The paralyses, from whatever cause, call for two of the measures in all cases when any hope of improvement is entertained-electricity and exercise. When it is realised fully, as it soon must be, that Electricity is to fill a great place in the medicine of the future, and the men who stand high in the councils of the great medical colleges, and who themselves from neglected early education know little or nothing of the subject, begin to see that it is not to be ignored, then, and not until then, will the education of the younger medical men in this department receive attention, as it does today in subjects of far less significance. When men who are not well informed in the employment of Electricity realize that it is a dangerous agent in ignorant hands, and not until then, will the rewards it so well merits from skilful employment place this valuable measure in its proper sphere as a therapeutic agent. Not alone does ignorance exist in the use of Electricity, but the same is equally true of the employment of Oxygen, Hydrotherapeutic Measures, Therapeutic Exercise, and Light-Natural measures which should appeal to all. There are other methods which, while receiving more attention, perhaps, than Electricity, that have not been given proper significance in the great medical schools of the world. Natural measures will very largely constitute the physician's means in the future. Imbued with the truth of the last statement, leading physicians, who have devoted themselves to the study and scientific employment of the measures properly constituted as physical measures, have founded a school for post-graduate instruction." - in "The Journal of Advanced Therapeutics", 1902.

Counter Indications for Electro-Therapy

1. Pacemakers.
2. Electric Insulin Pumps.
3. Drug Injection Devices.
4. Electronic Wearables, either: In or On the Body.

Individuals with: Pacemakers, Electric Insulin Pumps, Drug Injection Devices; Are Absolute Counter Indications for High-Frequency Healing Devices, also being in the vicinity of their use. This also applies to any other Electronics in or on the body, they will be disturbed! High-Frequency Healing Devices, also interfere with other electronic devices such as: Phones, Watches, and Computers. The more so with the extremely Powerful High-Frequency Devices.

Safety Precautions

It is best to stand on an electrically non-conductive surface: Wood, Stone, Linen, or Rubber. Use a protective device between the power supply, and any High-Frequency Healing Device apparatus. This can be a ground fault circuit interrupter, or a fused outlet; Isolating transformer are the best.

Chapter 5

Colour Therapy

*"**Colour Is A Curative Power.**" - S.G.J. Ouseley, in "The Power of the Rays: The Science of Colour-Healing, 1986.*

The Vibratory Forces of Colour

Colour is Vibration: Vibration is the essence or the basis of colour.
Vibration is movement. Movement is activity of a positive and negative force.
All force is created by vibration.
We know that all vibration becomes electrical in its action and its effect.
Vibration is another phase of colour, of and of tone.
For, as has so oft been given, and as demonstrated in the experience of the Great Physician, He met the needs of the individual, whether by the spoken word, vibration, or application of means that attune, the dissenting tissue or body to the divinity that is in each soul, each body who has acknowledged, who lives in the Christ Consciousness.
For, returning to the first principle; as there are those forces that move one within another to bring harmony, as for light or colour, or sound, or motion, all of these are but the variation of movement, vibration.
What is the First Cause?
That from which all emanates, the Spirit of the force or influence itself; breaking itself upon the atomic structures about same, bringing those influences as it associates itself one with another in its varied forms of atomic structure.
For it is not strange that music, colour, vibration are all a part of the planets, just as the planets are a part, and a pattern, of the whole universe.

Colour Therapy is the application of both Light and Colour in the Treatment of certain health conditions; both physical and mental, by the use of various Colour Rays.

The principle of Colour Healing, is the vibrational increase of the physical and etheric cells, with the aid of a Colour Rays.

Is important to realise that Colour, like other Forces and Energies in Nature.

Is Either:

1. Positive, and
2. Negative

In Its Effect Either:

1. Beneficial.
2. Harmful.

It is of the utmost importance that we should cultivate the right colour vibrations, in and around our bodies and surroundings.

> ***"In my laboratory work I have exposed microscopic cells, of various organisms, such as Algae, Infusoria, Yeast, Bacteria; to either direct or diffused sunlight as well as to various types of artificial illumination through colour filters of various wave-lengths. The specimens are placed in individual dishes covered with coloured glass or gelatine, transmitting only a selected range of light. Ultimate Results have proved that each colour has a specific function to perform in the development of normal life: and that this life-promoting, biological potency is contained within a particular range of intensity; correlated to certain elements contained within the Protoplasm (Basic Life-substance), and which under the stimuli of that colour become actively potent."*** *- Maryla De Chrapowicki, in "Spectro-Biology, Light and Colour Therapy", 1938.*

"It cannot be denied that the cures obtained by the Agencies of Colour and Mind, stand out as living witnesses of the power that is wielded by them.

We have heard much of: Sun Baths, Ray Treatment, Electricity, Radiant Heat.

And it is gradually becoming recognised that the finer and especially the etheric forces of Nature, are of more avail.

The famous American Colour Scientist, Dr E. Babbitt, patented an apparatus which he termed the **Chromolume, designed to transmit the Sun's Rays through Coloured Glass.**

> ***"Chromolume, which means literally colour-light. Its colours being arranged very much on the law of harmonic contrast, as well as according to the principles of chemical affinity, it constitutes one of the most beautiful ornaments imaginable for a drawing-room, or bed-room window, and certainly one of the best of all instruments for vitalizing, healing and toning up the human system."*** *- in "The Principles of Light and Color: the harmonic laws of the universe, the etherio-atomic philosophy of force, chromo chemistry, chromo therapeutics, and the general philosophy of the fine forces, together with numerous discoveries and practical applications", 1878.*

It is perhaps sufficient for the ordinary reader and healer to understand the main points of the theory and then to pass on to their practical application.

The source of all terrestrial life: the Sun; contains within it practically everything of which the earth (and its inhabitants), are composed, and if there be any potency in drugs that potency is intensified by coming direct from this centre of Life and Force.

It is therefore not surprising to find that the colours which the Spectroscope reveals are indicative of various metals and gases given off in the form of others varying in intensity and quality, some of these colours being termed heat or thermal colours, and the others cold or electric.

Coloured glass hinders the passing through of certain rays and when these are precluded interesting results are effected.

Experiments have shown that **plants grown under Red glass shoot up 4 times more quickly than in ordinary Sunlight, and that slower growth occurs under Green or Blue glass.**

It is well known that in Nature heat associates itself with Red.

In diseases heat is expressed by redness, as in inflammation, fevers, etc.

In the emotions, people turn red with passion and anger.

Disease Is a Want of Harmony in the System.

The best length of time for a Colour or Ray Treatment is 30 minutes or less.

The practical application of Colour to the human body falls into 2 divisions:

1. General diffusion.
2. Local concentration.

In treatment by general diffusion the method consists in focusing the light rays all on the body, with special reference to the back.

It is excellent as a general tonic for recharging the tired cells with new vitality.

The patient should either sit or lie down in a relaxed position, stripped to the waist, and should be wholly immersed in the light for 30 minutes.

The great value of Colour Therapy as a remedial agent lies in the penetrative power of light.

Light and colour have a direct action on the protoplasm of the body; the speed and power of the chemical and other reactions depend upon the biological state of the organism.

Scientists are of the opinion that the penetration is simply a process of osmosis (permeation of the cells).

But the generally accepted view is that light and colour penetrate and influence the body activity by arousing sympathetic vibrations within the organism.

In other words Light and Colour work according to the Law of Attraction.

As most students are already aware, all physical bodies are components of electro-magnetic points of energy or elements in a refined state of rarefication.

Concisely speaking, Health Is The Condition of Perfect Equilibrium Between These Elements; but that Equilibrium is only maintained as long as there is perfect rhythm and harmony throughout the organism.

In studying the nature of Light, it is important to remember that all radiations emitted from a luminous body travel through space in perfect rhythmic vibrations in the form of waves. Each atom and cell is a living thing with its own conscious life and each group or aggregation of such atoms and cells into a more complex being is again a living entity.

The Cosmic Rays and The Forces of Colour which play upon our physical bodies Affect the Condition of the Physical, and Etheric cells and atoms; Some Groups of Cells Are More Influenced By Certain Colour Rays Which Affinitise with them, than by others.

"Light and Colour", said the philosopher Bacon "demand investigation before form, for Colour is Life."

Pythagoras declared that there is: **"One Universal Soul permeating all things, which in substance resembles Light."**

The splendid Symphony of Colour which we see manifested on all sides of the universe, is the visible expression of Divine Mind. It is the cosmic manifestation of the One Life Principle in the form of Light-waves." - in "The Power of the Rays: The Science of Colour Healing", 1963.

"The Light Cure is Nature's own, professed Dr Babbitt who utilized the sun's energy rays to their fullest capacity to heal and cure the afflicted among his many followers. The Concentration of a Specific Colour Stimulates Secretion of the Corresponding Glands to that colour which flows through the diseased area, Bringing about Balance, Harmony and Restoration.

Colour works through us, in us, in every cell, nerve and gland!

It is an active power exerting a great influence upon the consciousness, soul and spirit. The value of this force "is spiritual", states Dr Babbitt.

Absent and Mental Healing are also applicable through the Treatment of Colour. With Absent Healing, the healer pictures, in his mind, a specific colour required to aid the afflicted area. This process operates by use of the consciousness concentration of a specific Healing Ray, and by Projecting its Vibratory Healing Power upon the patient.

A mental Colour Treatment embodies great beauty and power.

Through mentally concentrating on the power and effectiveness of a specific healing ray, the healer also transfers this balancing and harmonious colour treatment to the individual. It provides great benefits to both healer and patient, as is generally the accepted case in most spiritual healings.

In Arthur Findlay's The Unfolding Universe he reminds us that:

> ***"Life, then, is largely made up of our being conscious of colour."***

" - in "Color - Its Healing Properties", IAPSOP, 10 March 1979.

The 3 Most Useful Colours in Colour Therapy

1. Green Light (Green Is The Healing Vibration, for the Green Glass deflects certain Rays that cause Greater Healing power from the Ultra Violet Light for meeting the wasting or destructive forces in the human body).

2. Infra Red Light (Electricity of the Low Form; 20 to 30 minutes maximum).

3. Violet Ray (Hand Violet Ray; 15 minutes maximum).

4. Ultra-Violet Light (1 to 2 minutes maximum, 100 cm away from the body).

5. Ultra-Violet Ray (Mercury Quartz Light, 4 minute max., 100 cm away).

6. Blue Light (those of the Blue Light, or that Termed the Infra Red But Reflected Through Prisms so as to receive the Blue Rays, even of the Infra Red).

Colour, Light And Vibration

"Spectrobiology studies the universe in the elementary terms of Colour, Light and Vibration.

How Light Generates Life

Spectrobiology, in its ongoing attempt to grasp How Light Generates Life, has indicated the extraordinary Importance of the Length of Light Rays (that is, the colours of the spectrum) which strike and invade "inert" matter.

We breathe in an ocean of electromagnetic waves; Our Physical Bodies Are Electromagnetic Bodies.

In a simple minded way this is what we're getting at when we speak of solar energy, the very energy that activates the chlorophyll in plant leaves.

And because the planets and our atmosphere refract the solar energy (both the sun's rays and its magnetic field), we might well say the planets affect us through their colour; an easy example is the planet Mars, which we see as Red.

Red is a Colour that Stirs Us. The planet has come to represent the many degrees of aggressiveness in man's nature, and has thus been accorded, through the ages, this influence." - in "Beyond Astrology", Harper's Bazaar, 1968.

The Solar Spectrum

Positive and Negative are opposite ends of a Spectrum, with Neutrality at the midpoint.

"The Solar Spectrum is to be understood as a Biological Unit, in which Green occupies a middle position in terms of wavelength and frequency of vibration, representing the zero point, so to speak, while Red and Violet oppose each other, balancing each other as antagonists.

Red is long-wave, sluggishly vibrating, warming, biologically and chemically inactive, and spiritually stimulating; Violet, on the other hand, is short-wave, rapidly vibrating, biologically highly active, and spiritually calming.

Animal and Plant Life Require the Effects of Both Rays, and The Healing Power of Light Is Based on the Interaction of Both Types of Rays." - Franz Thedering, in "Die Naturwissenschaften", 21 November 1924.

Painted Glass Windows in Churches

"Reds, Yellows, Blue, Green in Glass painting (especially when the sun shines) does much refresh the Spirits.

After this manner did Dr R. revive the spirits of a poor distracted gentleman; for whereas his former Physician shut up his windows, and kept him in utter darkness, he did open his window-lids and let in the light, and filled his windows with glasses of curious Tinctures, which the distempered person would always be looking on, and it did conduce to the quieting of his disturbed spirits.

Dr Sanderson said (speaking of church music) in short, whatever does tend to the quieting of the mind and contemplation, tends to Devotion.

Johannes Medicus, who lived and wrote in the time of Edward II, and was Physician to that king, gives an account of his Curing the Prince of his Smallpox by ordering his bed, room, and his attendants to be all in Scarlet, and imputes its Cure in great measure to the virtue of that colour.

The same was done in the case of the Emperor Francis I, in 1765.

Of Red it is certainly true that it is a warm colour; and the impression of it on the mind is stimulating.

Experiments have shown that Different Colours Exert Various Influences over living forms, including man." - in "Medical Symbolism in Connection with historical studies in the Arts of Healing and Hygiene", 1891.

The Healing Power of Light

"We live in the age of light, of electrical light.

This not only serves as illumination, but is also used for healing purposes.

But we are not dealing with that kind of light here.

We are dealing with Sunlight, whose healing power is still far too little appreciated and used.

Spring, with its mild Rays of Sunshine, is the best time to use Light as a Healing Agent, as a Spring Cure.

Anyone suffering from Rheumatism, or Gout should sit in the sun with the aching limb as often as possible, let the Mild Sun Shine on it for at least 1 hour, and he will notice to his joy how Beneficial, how Healing and Pain-Relieving the Sun's Rays can be.

Anyone who is Convalescing, or Suffering from Nervousness should seek out the sun, lightly dressed if possible, and sit for 1 or 2 hours, exposed to the sun. Very soon, they will feel strengthened and calmed.

With this Healing Method, only the head and eyes need to be protected from prolonged sun exposure, i.e., with a hat with a wide brim.

The Light Healers of our time, like to pretend they had discovered the Healing Power of Light.

But as early as the 18th century, the great German physician Hufeland healed with light. **Light is just as Important for Health as Clean Air.**

Humans are among the creatures of light: they cannot endure darkness in the long run. The human brain is a light organ, which sleeps during the night and needs the stimulus of light to fully awaken again.

People who are kept in dark rooms for long periods of time suffer from physical and mental deterioration.

Many people have already gone mad through prolonged, violent deprivation in dark dungeons. Sunlight attunes human nature to greater nervous activity, to greater reactivity, to a more joyful spiritual state.

People who turn day into night and day into day live contrary to nature and sooner or later suffer premature death from serious illness.

Light Is The Most Indispensable Stimulus for the Nervous System.

Humans Cannot Thrive Without Light, just as Plants Without Light Cannot Thrive. Plants without Light have no green flowers, only pale colours.

Pale is also man who is in the darkness or even in twilight, even if he had the purest air in a room. Light and pleasure are, as they must always be together, if life is to remain constant. The Sun alone Is Light, which gives us what we need to live and thrive. With Light, the energy also descends to earth.

Light is to be regarded as the Source of Life, since Oxygen, called the joy of life, develops from plants under its influence.

The Energy, however, is a substance indispensable for Life, as only through it can the renewal, through which our life is sustained, come. It is Sunlight that provides Ozone, the substance that fills the lungs, that heals the miasmas in the lungs. This also explains why modern medicine treats the terrible pulmonary consumption not with medicines, but only with pleasure, and specially at the beginning of serious illnesses, Treatment is accompanied by the best results. It has long been known that Sunlight by its very presence accelerates the animal's development.

The great Pettenkofer of Munich established the fact that the amount of exhaled carbon dioxide increases in the light, and that it reaches its lowest point in the dark. Fattening is therefore better in the dark than in the sun; this type of fattening is to be rejected, because it leads to pathological fat formation.

Fundamental Functions, Require Long Light. It is a well-known fact that a person is a completely different person in Sunshine than in dull weather.

People speak nowadays of Electrical Treatment and praises it.

This Electrical Treatment can be best achieved through the Sun's Rays, in spring. In the Sunbeam, Larch (conifer trees of the Pinaceae family; products extracted from larch include arabinogalactan, rosin, turpentine), and Electricity are intimately Combined, hence their Wonderful Healing Power.

The human organism reacts particularly sensitively to light.

The light it is like the young striving for light and warmth.

A convalescent recovers his strength much faster if he is in a sunny room, where the sun can shine far faster than in a dark one. Hence, being in the North Hemisphere, the healthiest place is facing south. **A troubled mind is healed, strengthened, more quickly and reliably by a stay in sunny weather, by a trip to the glorious sunshine. Entire families travel to Nature Outdoors, and Forest Walks Are Refreshment for Body and Soul, and Return to Refreshed."** - in "Die Heilkraft des Lichtes", Die Presse, Oſtmärkiſche Tageszeitung, 4 April 1914.

The Power of Light in Healing

"Light acts as a chemical stimulus on the living cells that absorb it.

It is not the sense of sight that is sensitive to this light, but the living tissues themselves. These effective rays are primarily invisible, so it is now necessary to measure the invisible rays comparatively. Ultraviolet radiation has a scattering effect on negative electricity (Hallwachs effect). This is the basis of the zinc sphere photometer, and more recently, those with potassium-sodium cells instead of zinc spheres." - in "Prometheus : Illustrierte Wochenschrift über die Fortschritte in Gewerbe, Industrie und Wissenschaft", 11 November 1916.

Light As A Remedy

"Light As A Remedy. The microorganisms of typhus, anthrax, cholera, and the like, perish, as Spemann's "Mother Earth" emphasizes, even on the best nutrient medium when exposed to the sun's rays.

In direct sunlight, they usually dissolve into nothing after just a few hours, and under certain circumstances, even after minutes.

All relevant bacteriological experiments have also produced a consistent result: that the so-called chemical rays, i.e., the Blue, and Violet rays, primarily exert this Bactericidal Effect.

Émile Duclaux, who used pure cultures, established that only light, not heat, caused the destruction, for iodine flasks, which are continuously exposed to the highest temperatures in a dark incubator, still show viable cultures years later. **He concludes a treatise on this subject by stating that light is the most powerful, cheapest, and most widely used bactericidal agent at our disposal."** - in "Lodzer Tageblatt", 22 July 1899.

Colour As A Remedy

"Today, no prominent physician would deny that Colour Plays an Important Role in the Healing Process, and that its correct choice proves Particularly Useful in Nervous Disorders, and Mental Illnesses.

In the 1890's, Parisian physicians claimed that Blue Light had an exceptionally healing effect on Smallpox (Variola), and that the Healing Process left barely any scars on the skin. In China, for Epilepsy, the patient is placed on a Purple carpet, and the windows are covered with Purple veils.

For Intestinal Diseases, the patient's abdomen is smeared with Yellow paint, and daylight is drawn into the room through Yellow curtains.

This is evidence that the influence of Colour should have some significance in cases of illness among all peoples, and indeed, the more one delves into the subject, the less fantastical it appears. The door is opening ever wider to a clearer understanding of other Vibrations, other influences which may seem less comprehensible to us because they are of an Unseen Nature, but whose existence cannot be denied." - in "Die Farbe als Heilmitte", Amulette und Talismane und andere geheime Dinge, 1927.

> ***"Colour in Both its Physical, and its Spiritual Applications.***
> ***Colour as a Therapy is following Music Therapy, which is already an established help in medical treatment. Look out and search into that which man once knew of the metaphysical, and what man also used as energies to build his world in the past.***
> ***If we were totally conscious beings we could benefit from far better health."*** *- in "Healing Through Colour", 1983.*

Perception, Consciousness And Awareness of The Unseen

"If there are colours we cannot see, sound we cannot hear, and dense and solid bodies which we cannot discover by touch, it is certainly not too difficult to conceive of a world which though possessing sounds, colours and material objects, is yet imperceptible to us.

It would be as unknown to us, by direct perception, as a man is to an ant, or a bird to a beetle. And if any or beetle, or a fish in its element could be questioned and could make a reply, they would probably be deeply skeptical about the existence of men and birds - unseen and unseeable entities alleged to be living right along-side of them in the same world. This is, obviously a matter of what is called planes of consciousness or awareness, and not really in the "same" world at all. The ant world is the nest or hill; the fish world is a limited area of sea; and though it happens that man can peer in on both of them, they have no way of discovering him. At this point the fruitful principles of analogy suggest, that possibly there are invisible beings who can peer in on man also.

He may be the "crux" of creation (or cross of affliction of it) but is not necessarily its crown. And though reputed to be a little lower than the angles, this earth manifestation of him at least may be but little higher than a Caterpillar, in the eyes of unknown but observable Intelligences.

Of course, if you define sound as sensation, as audibility, then by definition there are no sounds you cannot hear. If you define colour as seeing, as visual perception, then by definition there are no colours you cannot see. But the physicist knows that colours are distinguished from each other by their wave lengths, and the length of the waves has been measured.

Red, has a wave length of .00007594; while Violet, at the other end of the visible spectrum, is .00003968. All the other colours come in between with decreasing values. But that does not mean the series or scale of colour is exhausted; the tabulation of wave lengths goes right along below the Red and above the Violet. It is only our ability to see them which runs out on us.

Using the word colour in this very correct and logical sense, it is plain that an object may have a colour which we cannot see, and will therefore be invisible to us." - in "The Ether Ship Mystery and Its Solution", 1950.

A Note on Ether (Aether) may be defined as the combination of a higher plane, leading to the realm of metaphysics, to where every consideration of the atom finally leads one. As are the positive and negative forces as relating to gravitation, they act upon the individual's Development, or individual's application of thought as applied To metaphysical condition or position as is occupied from within itself. Hence, as is seen, there are (as illustration for this) certain Characters of disease that accentuate mental forces, or the metaphysical activity of a human body.

Light, Colours, And Vibration

"We are pleased to note that our reflections on the secret powers of colour and light have inspired many readers.

Even a number of thoughtful physicians have expressed their appreciation for our studies and suggestions.

We now, forced by the force of the facts that were coming at us from all sides, transformed our society, which was engaged in modern light and colour research in the narrower sense, into one for high-frequency and light research, since we are increasingly recognizing the interplay of light, colour, and electricity and, for the sake of humanity's well-being, wish to combine and utilize these forces more and more practically.

An eminent physician, Medical Officer Dr E. H., writes:

"I have long been convinced that electricity is our Alpha and Omega."

I have been using colour therapy for some time, using simple blue discs through which I shine sunlight or spirit light.

Then I use red through!

I use of red curtains for measles and chickenpox.

I have also had the Goldscheider mirror for 2 years, in which I put red, blue, and green.

By incorporating high-frequency therapy, quite astonishing cures arise.

We bring a nervous patient to life through coloured lighting, into a calmer mood and allow the high-frequency currents to work on him, bringing balance to the inner workings of the body.

Eliminating tensions, shifting forces back and forth.

But even the solitary application of high frequency quickly helps in many cases.

A strong, young man, who suffers from neuropathy and often overindulges in the stimulants of tobacco and alcohol, suffers from frequent heart pain and irregular heart function.

The use of high-frequency current helps him every time.

He places the electrode on the heart area and is free of symptoms within 10-15 minutes.

I personally try this remedy when my heart is a little tired, and after a few minutes, I feel an indescribable sense of well-being.

One can literally feel the Blood Flowing down to my feet, which were previously cold.

Researchers in the field of innermost vital processes, who observe the endocrine gland connections, have highly interesting experiences when practising this Therapy. In this way, mysterious connections between the abdominal organs and the brain can be uncovered.

Through special application of the electrodes in the genital area, I Refreshed an Overtired Brain.

In a Goiter that developed during menopause in women, rapid regression occurred when the Electrode was placed on the Ovaries." - Prof Carl Wilhelm Ewald Paul, Director of the Munich Society for Light and Colour Research, in "Light, Colours, and High Frequency", Zentralblatt für Okkultismus, August 1923.

Colour Effects in Hospital Rooms

"Our experts, including many doctors, have long been conducting experiments with colours in hospital rooms and have convinced themselves of the health benefits of correct colour combinations.

We also mentioned this fact in our previous reports to this professional journal and today we would like to present some further observations that are certainly likely to attract general attention.

We first note that the sick and those in need of recovery have a veritable hunger for certain colours.

Indeed, it is mostly spring colours, the fresh, cheerful tones, that are desired.

Those recovering from Typhoid, for example, crave light green and seem to gather new strength in this colour.

The Entire Range of Spring Colours Is Beneficial to Weak, Suffering children.

In cases of Rickets, They Recover Quickly in rooms maintained in this way, with simultaneous exposure to the darkest Violet Under Appropriate Glass Panes in a sunbath.

The invisible Ultra-violet Rays in the Mercury Quartz Light also work wonders on them. It seems that this colour contains the substance or force that their bodies lacked.

We have demonstrated in many experiments that the mentally ill can greatly benefit from the correct distribution of colours in their rooms.

The observations of the effects of colour in hospital rooms recently submitted by our Austrian expert, Ing. F. E. Schillinger, are quite astonishing.

He writes:

> *"I had to enlist and in 1918, suffering from severe influenza, I was taken to the Rainer's Hospital in Vienna. Our room, which was painted pink to the Southwest, had white beds, etc., and was occupied by 11 patients, 3 of whom died. During the disinfection of the room, 9 of us were quartered in a room, in which 6 soon died.*
>
> *And this room, also facing Southwest, was painted blue-gray.*
>
> *The weather was, however, also very bad and we all felt very depressed.*
>
> *We were then taken to another room; the rainy weather continued, the location was facing south and Southwest, the walls were painted a so-called "rich" Yellow (cadmium dark). The ceiling stripes were Orange, the ceiling itself very light Blue.*
>
> *Even today, I fondly remember the hours spent in this room, for we laughed and joked here from morning until night. None of our staff of 7 men died, and it was in this room that we all first received that symptomatic "Nosebleeds", which seem to initiate the so-called healing crisis of this disease. I still have drawings of those rooms, made out of boredom, in pencil, with colour notes. I emphasize this so that you don't think your comments have led me to affirmative statements. Regarding your observation that violet is beneficial for people with nervous disorders, I would like to add: When I was wounded in 1917, shortly after having fallen in an avalanche, and suffered a nervous shock, I became quite nervous. It was then, as I was rummaging through my front sketches, that a memory of "Night Mood of the Karst" particularly attracted me, so much so that I made a small colour picture based on it. It was composed in the following colours: Parisian Blue, Naples Yellow (bluish) for the highlights, dark red, violet from Par. Blue and Carmine; thus, the basic tone: violet.*
>
> *As nervous as I was, I was able to demonstrate incredible patience in this activity.*
>
> *The benefits were mutual. Since I liked working in so-called colour schemes (blue-*

> ***gray, also yellow-brown, yellow-gray), I found in your explanations the explanation for many things that had remained incomprehensible to me until today. For example, a picture in a golden-brown shade comes twice as fast to me as one in blue-gray."***

And we could present hundreds of such examples and reports.

Seeing is a very complicated process, the uncovering of which the human mind has long struggled to understand. But the view of our great ophthalmologist and light researcher Dr Fritz Schanz, that light affects the eye no differently than it does in nature and that

Different lights correspond to different excitations in the optic nerve, points us in the right direction. And just then, another capable researcher in the field of light and color perception, Dr F.W. Fröhlich, enters the picture.

Based on his investigations into electrical phenomena in the cephalopod eye, he arrives at further interesting conclusions.

The form and frequency of the electrical current fluctuations occurring in the eye upon exposure to light are his fundamental structure.

The retina is responsible for generating these current fluctuations in a particular way, and when they reach the center, we evaluate them as specific lights or colours. Every Light of a Certain Intensity Corresponds to a Certain Frequency of Stimulation in the eye, and thus every Light Generates Currents of a Different Frequency of Oscillation.

These oscillations, and only these, are transmitted to the center: red produces currents of the lowest oscillation frequency, violet those of the highest frequency. The energy of the oscillations also varies; for the same stimulus intensity, the electromotive force is much greater for violet light than for green, and in turn, more significant than for red.

Added to this is the varying absorption capacity of the retina.

Thus, we have three things that interact: the frequency of the oscillations, the energy value, and the absorption.

These are the characteristics of each light.

The tone of the visual center is either increased or inhibited by the stimuli.

For this researcher, the essence of colour perception lies in the particular response of the light-sensitive elements in the retina to the light stimuli and in the response of the center to the oscillatory stimuli of varying frequency and intensity sent to them.

Accordingly, the differentiation of light stimuli in the retina and color perception depend on the extent to which the retinal elements are able to differentiate the light stimuli and convert them into specific electrical current fluctuations.

The ability to emit different typical current fluctuations in response to different lights is the decisive factor." - Prof Ewald Paul, Director of the Munich Society for High Frequency and Light Research, in "Colour Effects in Hospital Rooms", Zentralblatt für Okkultismus, April 1924.

Colour Therapy

"The ancient peoples have many mysterious things to tell us about the powers of colours; the Chinese placed a special spirit in each of them.

Peoples taught that yellow had excretory powers, that it aroused and expelled. Modern therapy confirms this. Sunlight directed through yellow glass onto a sluggish abdomen quickly causes deviation.

The Colour Therapist Körner explained in the relevant session that yellow paper and yellow-painting of the abdomen also produced similar effects.

The ancients used chains of red and blue glass beads to treat goiters and other cold sores.

We know that red light loosens the goiter and blue light influences it chemically. If only red light is used, the goiter initially enlarges, then softens, loosens, and becomes more vibrant through increased blood flow.

However, one must then ensure that the fluids are diverted downwards.

Green heals wounds.

Wörner says:

> ***"If you apply green (naturally non-toxic) paper, you can practically see the growth. Even with green glass, you experience miracles."***

The colours that are pleasing to the eye are not always beneficial to the body.

One must observe and find a good middle ground.

For example, For example, blue is harmful for scrofula, varicose veins, etc.

Ancient peoples also knew this, which is why they wore copper bracelets around their wrists and ankles. With Ruby glass, through which we pass light, we can now beneficially influence various processes in the abdomen.

Even coloured glass bowls can work wonders.

Our artistic advisor, Carl Koch, a highly educated man who currently worked in Paris with the famous physician Prof. Tissier, explains that he used one of the simplest instruments, the well-known kaleidoscope, with nervous children suffering from insomnia, which always brought rapid success.

The children had to observe the play of colours and the emerging shapes, were distracted, and fell asleep.

Our expert Michaelis, who has been conducting serious scientific studies in the field of colour for over 20 years, is particularly concerned with the colours of the months, the colours of the mood under which the individual is influenced since birth. And he cannot help but acknowledge the truth of many of the ancients statements. All his calculations always return to the same point.

For those born in January, ultra-red is considered the dominant colour.

Ultraviolet for the February people, green for March, blue for April and May, red for June, orange for July, indigo for August and September, yellow for October, violet for November, and white for December.

We still face many puzzles, but science already recognizes that profound knowledge is hidden in the traditions of the ancients." - Prof Ewald Paul, Director of the Munich Society for Light and Colour Research, in "Colour Mysticism and Colour Therapy", Zentralblatt für Okkultismus, July 1922.

> ***"For it is Nature that Cures: Not the Physician or Nurse. Light; Second only to Air, Is Light as an essential for growth, health, and recovery from sickness (not only daylight, but Sunlight), and indeed Fresh Air must be Sun-warmed, Sun-penetrated Air. This should be meant to include Colour, pleasant and Pretty sights for the patient's eyes to rest on; variety of Objects, Flowers, Pictures. People say the effect is on the mind. So it is, but the enlightened physician tells us it is on the body too. The sun is a sculptor as well as a painter."*** *- Florence Nightingale, in "A Dictionary of Medicine; including General Pathology, General Therapeutics, Hygiene", 1894.*

The Usefulness of Colour & Vibration Therapy

"Case 1. Janet Whittenberg son suffers from; Cerebral Palsy.
Case 2. Betty Drury son is; Mentally Retarded.
Case 3. Virginia Beach woman has a son whose; Brain is Severely Damaged.

The 3 mothers have a common bond in that Medical Trade Doctors, have told them their sons are beyond medical help. And they have a further bond.

They all take their sons to Dr Charles F. Whitehouse, DC, a Chiropractor, for Treatment with Coloured Lights, and Psychic Vibrations.

He uses Radionics, which he calls Etheronics, and Colour Therapy.

Mrs Whittenberg, of Norfolk, says she has obtained results from Dr Whitehouse, DC.

Her 3 year old son, has been getting better since she started taking him for treatment.

> ***"I had gone to so many Medical Trade Doctors, and Hospitals. He was a vegetable. He did not do anything. They said his brain was deteriorating, and there was nothing they could do. They considered him a terminal case."***

On the advice of a neighbour, she took her son to Dr Whitehouse, DC.

"I saw results within a month. He had only 2 teeth in his mouth, and in 1 month every tooth had come in. He had stopped growing and he started growing again. He was all yellow but that faded away. Now he is very alert, knows everyone in the family and watches TV. I am very pleased."

Mrs Drury, of Newport News, said she has seen:

> ***"Tremendous Improvement in my 15 year old son, since I began taking him to Dr Whitehouse, DC. He remembers better, keeps up school work better, writes better, recognizes more words, and his features are changing. Before we took him to Dr Whitehouse, DC, he was very hyperactive, he tore up everything and he couldn't even tie his shoes. After 1 month of treatment, he suddenly sat down and tied his shoes. And he hasn't torn up anything since. Everyone in the family notices the difference."***

Mrs Drury said Medical Trade Doctors told her that son was uneducable and untrainable. But, she said, he is learning more all the time.

> ***"His speech therapist at school is amazed at the difference. He has started making 100's on every one of his tests."***

The Virginia Beach mother said she has been taking her 6 year old son to Dr Whitehouse, DC, since February.

> ***"There's been a lot of progress. It's a very strange coincidence if it isn't due to Dr Whitehouse, DC. I'm encouraged by what I see. I'm very pleased."***

She has continued to take her son to Dr Whitehouse, DC, because her son has slowly but steadily been improving. And Medical Trade Doctors, had told her there was nothing they could do. She said her son has suffered from brain damage since birth, and could do little more than roll over before Dr Whitehouse, DC treatment.

> ***"He has since become aware of his surroundings, he scoots all over the place, he is starting to relate to people, and he is developing a temper. He still can't walk, or talk but he can do a lot of vocalizing with sounds."***

Dr Whitehouse, DC, specializes in the Treatment of the Mentally Retarded.

But he also treats persons with Cancer, Heart Problems, and other illnesses.

He treats them by shining Coloured Lights on them, and bombarding them with Psychic Vibrations.

A complete treatment of body, soul and mind takes about 300 hours.

Treatment is available without charge for the mentally retarded through the Etheronics Research Foundation. Dr Whitehouse, DC, claims a basis for support of Colour Therapy in work being done at the University of Minnesota. Dr Douglas Pratt of the university's biology department said he is researching the effect of coloured lights on plants. He said he has found that very deep reds and very deep blues; have an effect on the growth of plants.

Dr William Tiller, chairman of the Department of Material Science at Stanford University. Spent 1 year investigating the work of George de la Warr, a Radionics Researcher in Oxford, England.

> ***"My experience is that it is very effective in the hands of the right person. Radionics is an intuition training device. Basically, the human being is the instrument, and the device helps the individual to attune. The operator is the key, not the device."***

Dr Tiller, believes there is promise in Colour Therapy.

> ***"There is Soviet work going on right at the moment in which they are shining laser beams at acupuncture points and, depending on the wavelength or set of wavelengths that they use, they are indeed producing healing modalities.***
> ***They're getting rather strong effects of recuperation in people for a whole variety of conditions but it depends very much upon the colours, and colour combinations they use. And in this particular case, it's laser light. Both fields deserve scientific research. My own feeling is that it's tomorrow's Physics."***

Radionics was developed in the early 1900s by Dr Albert Abrams, MD.

His theory was that diseases could be diagnosed by evaluating radiation from the human body. He devised a machine, the Oscilloclast, to measure the radiation. Colour Therapy is based upon the aura, which is an Electromagenetic Field (EMF), which appears to extend about 3 feet around the human body.

People can be trained to see the multi-colored auras.

Some say they can diagnose diseases by interpreting the intensities of the different colours and the distances they extend from the body.

Dr Whitehouse, DC, says the aura is an electronic duplicate of the physical body. He calls it the etheric body.

He has developed a machine, based on radionic principles, which he calls an etheronic analyzer. He says he can measure changes in the concentration of energies in the aura. And, he says, he can measure the strength of the energy coming from any specific part of the body.

He believes that every part of the normally working body radiates a specific level of energy.

If all energies are at their normal levels, an individual's etheric body is in balance. But if the energy levels are either too high or too low, the body is out of balance or in disharmony.

And disharmony in the etheric body, he says, can result in disease in the physical body.

Nothing happens in the physical body, he believes, unless it first happens in the etheric body.

Dr Whitehouse, DC believes that by bringing the etheric body, the aura, back into balance, he can treat a physical disease.

The aura can be brought back into balance by shining specific combinations of coloured light on it.

Different combinations are used to treat different problems.

To find out what particular energy levels are normal for a person, Dr Whitehouse, DC, uses his Etheronic Analyzer to help him psychically tune himself to that person's mind.

He asks the mind what the normal energy levels should be for each part of the body he wants to check.

The answer comes in a numerical readout on the analyzer.

Dr Whitehouse, DC, then concentrates on the specific parts of the body and gets a readout on what the energy level actually is.

To contact a person's mind, Dr Whitehouse, DC, first needs a Polaroid picture of the person. The picture, captures the vibrations from that person's body.

He places the picture in a coil in the analyzer, which, he says, helps amplify the vibrations and allows him to tune into the person's mind.

To get a readout, he rubs one hand on a sensitive plate of the analyzer and starts moving dials on the instrument with the other hand.

Each dial is circled by numbers.

His hand rubbing on the plate makes a squeaking sound which increases or decreases in intensity as he moves the dials.

When the sound stops altogether, each dial is pointing to a number.

The series of numbers is the readout.

The person whom Whitehouse is contacting may be in the next room, or may be miles away.

> *"With the mind, there is no distance".*

The key to success is the psychic ability of the operator.

> *"The instrument is an extension of the operator's mind. It permits you to use your mind to a greater degree than before."*

Using the readout, Dr Whitehouse, DC, determines what combinations of Coloured Lights are needed to treat a person.

If the person is in his office, the treatment is given by actually shining the lights on him. But the patient doesn't have to be there.

Each Colour of Light, Vibrates at a Different Frequency.

So in place of using lights to treat someone, he can use vibrations.

This is done by setting the dials on the analyzer, to the numbers which correspond to the vibrations to be used.

The picture of the person to be treated is placed in the coil.

The vibrations start in the operator's mind, and are picked up by the analyzer and transmitted to the patient.

> ***"The machine is a focal point for the operator's sensitivities. You tune your mind, and your energy penetrates its energy field. The instrument operates as your mind operates. And it keeps doing the vibration pattern even after you walk away from it."***

The vibrations reach the patient's etheric body, and "Energize it to start vibrating and do what it should be doing."

Before treating a person for any specific illness, Dr Whitehouse, DC, first cleans out the person's aura. This is necessary, because the aura may have ruptures or leaks. Ruptures can occur from such experiences as being administered anesthesia, having an accident, suffering emotional shock or high fever, smoking marijuana or taking hallucinogenic drugs.

Ruptures also can be caused by acute drunkenness.

About 7 of every 10 persons have leaks in their auras.

When a leak occurs a discarnate entity may attach to the person through the ruptured aura. If there are several leaks, a person may have several entities attached to his body. And each entity places a drain on the body.

With certain combinations of coloured lights or vibrations, Dr Whitehouse, forces the entities out of the body and seals the leaks in the aura so they can't get back in. In the experience of Dr George Ritchie, psychiatrist, has described an out-of-body experience.

He saw entities attaching themselves to people through openings in their Auras." - in "Beach Chiropractor Prescribes Colors, Psychic Vibrations", The Beacon, Virginia Beach, Va., 18 October 1979.

Green Light Therapy

"We investigated the Effects of Light on Human Fibroblasts in vitro by measuring protein levels of cytokines secreted by fibroblasts during the process of wound healing and on the migration of HaCat keratinocytes (spontaneously immortalized keratinocyte cell line derived from adult human skin).

The results suggest that some cytokines are significantly increased by exposure to Light, especially leptin, Interleukin-8, and Vascular Endothelial Growth Factor A, but only by Green Light.

The migration of HaCat keratinocytes was significantly promoted by Red or Green Light.

In Conclusion; We Demonstrate that Green Light Promote Wound Healing by inducing migratory and proliferative mediators, which suggests that Not Only Red Light, But Also Green Light can be a New Powerful Therapeutic strategy for Wound Healing." - in "**Green Light emitting diodes Accelerate Wound Healing", Wound Repair and Regeneration**, 1 March 2012.

> ***"Green Light provides an Anti-Inflammatory Effect on Skin Burns."*** *- in "Green LED light has anti-inflammatory effects on burns in rats", Burns, March 2016.*

> ***"Green Light exposure reduced the number of monthly Headache days by an average of about 60%.*** *None of the study participants reported any side effects of Green Light exposure." - in* ***'The Healing Power of Green'****, University of Arizona, Winter 2020.*

Green Light Therapy Improves Multiple Conditions

"Light Therapy Improves Multiple Conditions such as; Seasonal Affective Disorders, Circadian Rhythm Dysregulations, and Neurodegenerative Diseases.

Green Light Therapy has been shown to be effective in Reducing Chronic Pain; in humans and animals. Moreover, this Therapy potentiated the antinociceptive effects (acting as a pain inhibitor). We showed that Green Light increases endogenous opioid levels while lessening synaptic plasticity and neuro-inflammation. Clinical translation of these results could provide patients with improved pain control and decrease opioid consumption.

Given the noninvasive nature of Green Light, this innovative Therapy would be readily implementable in hospitals." - in "Green Light Exposure Elicits Anti-inflammation, Endogenous Opioid Release and Dampens Synaptic Potentiation to Relieve Post-surgical Pain", The Journal of Pain", March 2023.

The Difference Between Red and Infrared Light

The main difference is that Red Light has a shorter wavelength, is visible to the human eye, and penetrates the top layers of the skin, while Infrared Light has longer wavelengths, is invisible, and can penetrate much deeper into tissues and muscles. Red Light is ideal for Skin Conditions, in the superficial tissue, whereas Near-Infrared (NIR) light is better for pain relief, wound healing, and deeper tissue issues.

The Influence of Light and Colour Upon the Lymphatic System

Light, especially Red, and Near-Infrared (NIR) Light Therapy, positively influences the Lymphatic System by Reducing Inflammation, and Stimulating Lymph vessel contraction, which Improves Lymph Drainage, and Reduces Swelling. Colour Therapy and ambient lighting, such as Blues and Greens, also support the Lymphatic System by promoting relaxation and reducing stress, creating a conducive environment for Lymph Drainage, and overall wellness.

The Effect of Near-Infrared Light on Nerve Regeneration

"Red to Near-Infrared Light have been shown to promote mitochondrial **oxidative metabolism. In this study, Near-Infrared Light irradiation improved nerve regeneration and increased antioxidation levels in the chamber fluid.**

Therefore, we propose that antioxidation induced by Near-Infrared Light may be conducive to Nerve Regeneration." - in "Effect of near-infrared light-emitting diodes on nerve regeneration", Journal of Orthopaedic Science, March 2010.

Infrared Neural Sensory Stimulation

"It has been demonstrated in recent years that pulsed, Infrared laser Light can be used to elicit electrical responses in Neural Tissue, independent of any further modification of the target tissue.

Infrared Neural Stimulation has been reported in a variety of Peripheral, and Sensory Neural tissue in vivo, with particular interest shown in Stimulation of Neurons in the Auditory Nerve.

Electrical Stimulation remains the gold standard in Neural Excitation." - in "Whole Cell Patch Clamp for Investigating the Mechanisms of Infrared Neural Stimulation", Journal of Visualized Experiments, 31 July 2013.

Red to Infrared Light Therapy

"Red to Infrared Light Therapy (λ = 600–1070 nm), and in particular Light in the Near Infrared range, is emerging as a Safe and Effective Therapy That Is Capable of arresting Neuronal Death.

Near Infrared range Therapy has the potential to develop into a safe and effective Neuroprotective Treatment for patients with Alzheimer's, and Parkinson's Disease (and presumably Other Neurodegenerative Diseases; such Multiple Sclerosis, and Amyotrophic Lateral Sclerosis).

If Near Infrared range was applied at early stages of the disease process, for example at first diagnosis, it could potentially slow further progression by Protecting Neurons From Death.

The Therapeutic possibilities are many and the potential outcomes very exciting." - in "Turning On Lights to Stop Neurodegeneration: The Potential of Near Infrared Light Therapy in Alzheimer's and Parkinson's Disease", Front. Neurosci., January 2016.

Neural Stimulation, Wound Healing, Cancer Treatment

"Infrared Radiation is Electromagnetic Radiation with wavelengths between 760 nm and 100,000 nm. Low-level Light Therapy, or Photobiomodulation Therapy generally employs light at red and near-infrared wavelengths (600–100 nm) to modulate biological activity. Many factors, conditions, and parameters influence the Therapeutic Effects of Infrared Radiation, including fluence, irradiance, treatment timing and repetition, pulsing, and wavelength.

Infrared Radiation Can Inhibit Cancer Cell Proliferation

Increasing evidence suggests that Infrared Radiation can carry out Photostimulation and Photobiomodulation effects particularly benefiting:

1. Neural Stimulation.
2. Wound Healing.
3. Cancer Treatment.

Nerve Cells Respond Particularly Well to Infrared Radiation.
Infrared Radiation appears to be more versatile than other electromagnetic wavelengths (such as visible light), as It Can Induce Neural Stimulation Effects, as Well as Promoting a Wide Range of Therapeutic Benefits in Cells or Tissues.

Brain Neuroprotection and Neurodegenerative Disorders

In this Review, we have Summarized the up-to-date literature Reports about Uses of Infrared Radiation, including:

1. Neural Stimulation (direct activation of neural tissue by Infrared Radiation);

2. Photoaging (emerging evidence that Infrared Radiation can have biphasic effects on the skin);

3. Antitumor Action (Infrared Radiation Can Inhibit Cancer Cell Proliferation);

4. Brain Neuroprotection (novel neuroprotective treatments for stroke, Traumatic Brain Injury);

5. Neurodegenerative Disorders (Infrared Radiation therapy for Alzheimer's and Parkinson's Diseases)." - in "Biological effects and medical applications of Infrared Radiation", "J. Photochemistry and Photobiology B: Biology", May 2017.

Anti-Inflammatory Effects of Near-Infrared Light

> ***"Near-Infrared can penetrate the dermis.***
> ***Near-Infrared is able to regulate cutaneous component cells, and immune cells and shows Significant Anti-Inflammatory Therapeutic Effects."*** *- in "Anti-Inflammatory Effects Induced by Near-Infrared Light Irradiation through M2 Macrophage Polarization", Journal of Investigative Dermatology, August 2021.*

Infrared Neural Stimulation of Brain, and Central Nervous System

"Modulation of Brain Circuits by Electrical Stimulation has led to exciting and Powerful Therapies for Diseases such as Parkinson's.

Because Human Brain organization is based in mesoscale (millimeter-scale) functional nodes, having a method that can selectively target such nodes could enable more precise, functionally specific stimulation therapies.

Infrared Neural Stimulation, Stimulates Neural Tissue via delivery of tiny heat pulses. This method provides focal intensity-dependent stimulation of the brain without tissue damage. **We demonstrated that Infrared Neural Stimulation Modulates Neural Activity in the cortex (as assessed with intrinsic signal optical imaging), and likely activates local intra-areal networks in layers II/III.**

This is the first study demonstrating application of Infrared Neural Stimulation to human Central Nervous System, and shows feasibility for stimulating single cortical nodes and associated sites and provided Infrared Neural Stimulation damage threshold estimates for cortical tissue.

Our results suggest that Infrared Neural Stimulation is a promising tool for stimulation of functionally selective mesoscale circuits in the human brain." - in "**Infrared Neural Stimulation in Human Cerebral Cortex**", Brain Stimulation, March 2023.

Near-Infrared Light Halts Cancer Growth

"Photobiomodulation therapy traditionally utilises red to infrared light (600–1000 nm) to promote wound healing, reduce inflammation and manage pain and age-related symptoms. Photobiomodulation therapy has become increasingly popular due to its non-invasiveness and the ability of red to Near-Infrared light to reach deeper into human tissue (650 and 750 nm, respectively) compared to other wavelengths of light. **Photobiomodulation, utilising non-ionising light in the visible and Near-Infrared spectrum, has been suggested as a potential method for enhancing tissue repair, reducing inflammation and possibly mitigating cancer-therapy-associated side effects.** Near-Infrared light is suggested to be absorbed intracellularly, mainly by chromophores within the mitochondria.

This study examines the impact of 734 nm Near-Infrared light on cellular senescence. Exposure to Near-Infrared light significantly increases senescence levels in cancer (10.0%–203.2%) but not in non-cancer cells ($p > 0.05$). **Changes in senescence were associated with significant modulation of mitochondrial homeostasis, including increased levels of reactive oxygen species ($p < 0.05$) and mitochondrial membrane potential ($p < 0.05$) post-Near-Infrared-light treatment. These results suggest that Near-Infrared light modulates cellular chemistry, arresting the proliferation of cancer cells via senescence induction while sparing non-cancer cells.**

Near-Infrared-Light Characterisation

LED Near-Infrared Light exposure was achieved by using a pre-mounted 7—LED array of NIR (734 nm) Rebel LEDs (Luxeon Star LED, Alberta, Canada) mounted on a SinkPAD-II 40 mm Round 7-Up base with a power output of between 0.328 and 0.420 mW (fluence = 63 mJ/cm2, power density = 0.05 mW/cm2), as described in ["Therapeutic application of light and electromagnetic fields to reduce hyper-inflammation triggered", Communicative & Integrative Biology January 2021]. The current study demonstrates that **Near-Infrared light inhibits proliferation in cancer cells but not in non-cancer cell. The proposed general mechanism, partially detailed in the literature of Photobiomodulation Action, Appears to Involve an Increase of Reactive Oxygen Species (oxygen-containing molecules that easily react with other components within a cell) production, which our data seem to confirm, and thus, could be operative in this senescence mode. This Mechanism Takes Into Consideration The Warburg Effect, where Cancer Cells Have A Greater Shift Towards Glycolysis (Glycolysis is the foundational metabolic pathway that breaks down glucose ($C_6H_{12}O_6$) into two molecules of pyruvate, generating energy in the form of Adenosine Triphosphate (ATP the primary energy currency of biological cells), and Nicotinamide Adenine Dinucleotide (NADH a coenzyme central to metabolism, found in all living cells. Nicotinamide Adenine Dinucleotide + Hydrogen, is the biologically active, reduced coenzyme form of vitamin B3 [niacin], found naturally in all living cells, it plays a fundamental role in cellular respiration, where it acts as an electron donor to generate energy Adenosine Triphosphate (ATP). Occurring in the cell's cytoplasm, it is the first stage of both aerobic and anaerobic respiration and functions without requiring oxygen), Leading to Increased Reactive Oxygen Species levels. The combination of the already elevated Reactive Oxygen Species levels in cancer cells and Photobiomodulation-induced Reactive Oxygen Species increase activates a signal cascade towards senescence and permanent cell cycle arrest as a stress response. This mitochondrial/Reactive Oxygen Species-based mechanism would support the well-described anti-inflammatory and wound-healing properties observed with Photobiomodulation."** - in "Selective induction of senescence in cancer cells through near-infrared light treatment via mitochondrial modulation", 21 June 2024.

The Effects of Infrared Light Therapy in the Treatment of Inflammation

"The beneficial effects of Red and Infrared Light in the treatment of inflammation have been well known since the time of Niels Finsen, who received the Nobel Prize in 1903 for his demonstration that a human autoimmune disease, lupus vulgaris, could be successfully treated and cured by application of visible light. In subsequent years, illumination of patients with red or infrared light, known as Photobiomodulation therapy (PBM), was proven clinically effective against a variety of human diseases including:

1. Achilles tendinopathy.
2. Alopecia Areata.
3. Psoriasis.
4. Thyroiditis.
5. Arthritis.

A unifying feature of all of these conditions is that they involve excessive inflammation.

The wavelength range used for Photobiomodulation therapy currently spans the infrared and red-light spectral regions. Exposure to these wavelengths is not known to generate any harmful side effects and infrared light, in particular, is the wavelength which best penetrates body tissue. Exposure devices are commercially available in a large range of intensities and wavelengths; they are fitted with laser or high-output LEDs as optical sources and exposure duration can be adjusted.

Pulsed Electromagnetic Field Therapy and Inflammation

Exposure to externally applied electromagnetic fields, known as Pulsed Electromagnetic Field therapy has likewise been shown to have anti-inflammatory properties in a range of diseases. Pulsed Electromagnetic Field therapy involves the external application of low intensity pulsed magnetic fields from 10 to approximately 300 Hz in frequency and around 10 mTesla maximum magnetic field strength. Unlike light, Pulsed Electromagnetic Field signals can penetrate the human body efficiently to reach internal organs, e.g., bronchi and lungs. Clinical studies have shown the effectiveness of Pulsed Electromagnetic Field in treating such conditions as arthritis, chronic pain, bone injury, wound healing, and lupus erythematosus; all of these Pulsed Electromagnetic Field treatments involve the resolution of underlying inflammatory conditions. A more direct analysis of Pulsed Electromagnetic Field therapy on the progress of inflammation has been obtained from recent molecular studies using different mammalian cell culture models in vitro. Pulsed Electromagnetic Field exposure was found to induce marked decrease in pro-inflammatory cellular markers including cytokines, gene expression, and activation of NFkB which characterize both the acute and the chronic phases of inflammation. Some changes occurred rapidly within hours after Pulsed Electromagnetic Field exposure, consistent with a direct effect on the cellular immune response. Intriguingly, many of these clinical applications of Pulsed Electromagnetic Field (electromagnetic) therapy seem to overlap with those of Photobiomodulation (illumination) therapy, in particular, those involving the resolution of inflammatory conditions.

Low-Level Magnetic Field Exposure Conditions

Two types of electromagnetic fields, Low-Level static magnetic field (LLF) and pulsed electromagnetic fields (PEMF) were used as treatment conditions.

In sum, our results have shown that both light (Photobiomodulation therapy) and electromagnetic fields (either Static or Pulsed Electromagnetic Fields) can be effective in reducing inflammation related to the Toll-like receptor 4 (a fundamental transmembrane protein of the innate immune system that acts as an early warning sensor. It primarily recognizes lipopolysaccharide; a major component of the outer membrane of Gram-negative bacteria; as well as damage-associated molecular patterns released during tissue) – dependent signaling pathway in human cell cultures. Their efficacy ranges from 20% (electromagnetic fields) to 40% (Infrared) reduction in inflammatory markers over a 48-hour period.

Our experiments with InfraRed irradiation and Electromagnetic field exposure have resulted in significant reduction of inflammation in human cell cultures. The necessary instruments, particularly in the case of infrared light, are readily available at low cost with no toxic side effects." - in "Therapeutic application of light and electromagnetic fields to reduce hyper-inflammation triggered", Communicative & Integrative Biology January 2021

The Action of Blue Light

"Phototherapy Is An Important Method of Dermatological Treatments.

Ultraviolet (280–400 nm) Therapy Is of Great Importance.

The Main Factors Responsible for Biological Changes Induced by Blue Light are Light Parameters. The Role, and the Mechanism of Action of Blue Light (400–500 nm), a UV-free method.

The Main Factors involved in the response of cells to Blue Light are Nitric Oxide (NO), and Reactive Oxygen Species (ROS).

It was demonstrated that Blue Light Induces an Anti-Inflammatory, and Anti-Proliferative Effect; thus, it may be beneficial for Chronic Inflammatory Skin Diseases such as:

1. **Atopic Dermatitis.**
2. **Eczema.**
3. **Psoriasis.**

Additionally, the Positive Effect on the Treatment of Acne Vulgaris, and on Hair Growth was also shown. Another beneficial effect is the Reduction of Itching, observed in some studies, which may be of Great Importance in the Treatment of patients with Skin Diseases. It seems that this method is safe, and the only observed clinical adverse effect may be transient hyperpigmentation." - in "Blue Light in Dermatology", Life (Basel), 8 July 2021.

> ***"It was announced in England about the beginning of this century, that the: Red Ray of Light was Heating; the Yellow Ray was Illuminating; the Blue Ray in a remarkable degree Stimulated the Development of Vegetable Life. Whoever has noticed the colour of the electric spark in atmospheric air, from an electrical machine, will readily recognize its likeness of colour to the blue colour of the sky. If experiments should be instituted to ascertain the electrical condition of the sky, as associated with its Blue Colour, and they should satisfactorily establish the connection, the result would prove to be one of the greatest blessings ever conferred upon mankind. What strength of vitality could be infused into the feeble young, the mature invalid, and the decrepit octogenarian! How rapidly might the various races of our domestic animals be multiplied, and how much might their individual proportions be enlarged!"*** *- in "The Influence of the Blue Ray of Sunlight", 1876.*

The Effects of Light in Colour Therapy

The Effects of Light in Colour Therapy:

1. Light relieves pain without the side effects of Narcotics; induces the organs to resume their work, and increases the oxidation.
2. Has a valuable nourishing effect on cellular tissue.
3. Increases the number and quality of red blood cells.
4. Promotes Metabolism.
5. Promotes Leukocytes (Light promotes certain leukocytes, such as T cells - or T lymphocytes, which are a crucial type of white blood cell in the immune system, that develop in the thymus and protect the body from infection and cancer, there are 2 main types: helper T cells, and cytotoxic T cells -, by increasing their motility and enhancing immune responses. Blue and Ultra Violet Light, in particular, can increase T-cell movement to sites of infection, while other forms of light, like Red and Near-Infrared, are used in photo-bio-modulation to influence Cytokine production - small proteins that act as messengers in the body, particularly within the immune system, to regulate immune responses and inflammation -, and other immune cell functions, including that of monocytes and neutrophils)
6. Stimulates the cells to eliminate waste products.
7. Regulates circulation (dilatation of blood vessels).

8. Relieves Inflammations.
9. Destroys Bacteria
10. Useful in Skin Diseases.
11. Destroys Pus Germs; Bacteria live on the skin (Bacteria like Staphylococcus Aureus, and Streptococcus Pyogenes, and Methicillin-Resistant Staph Aureus (MRSA), are the most common Bacteria that cause Abscesses).

Colours Have an Effect on Both: Body and Mind.

Colours Have Different Tributes:

Blue Colour

The Clinical Work by the Munich Society for Light and Colour Research, in the 1920's, show the usefulness of Blue Light in;

1. Calms
2. Relieves Pain and Soothes.
3. Acts against Nervous Excitation.
4. Rheumatism.
5. Insomnia.
6. Diarrhoea.
7. Violent bleeding from the lungs; Treated with 1 hour of Blue Sunlight.
8. Against Brain Inflammation, and Head Neuralgia.
9. Blue Light helps, animals get fatter.
10. Calves grow faster.
11. Nervous horses: The nervous system of horses can be improved with blue barn windows. Battery horses at the front get stables painted blue. Horses rest better, eat more, have fewer pests in the stable.
12. Ants, wasps, and other insects are deterred by blue light.
13. Plants grow and develop better; under blue light.
14. Blue was found useful in Thrombosis, and Severe Period Pains (Dysmenorrhoea,).
15. Blue was also used in prisons, to calm the inmates.

Red Colour

1. Activates, Impels.
2. Has a promoting effect upon the blood flow, into any affected tissue or organs, allowing for even more immune and defence substances, to circulate through the blood. Thus, Red helps to increase circulation in poorly perfused regions of the body, thus it has a helpful effect in conditions where arterial problems exist such as varicose veins.
3. Red glass is wonderful in barn windows to keep animals healthy.

Editor Note: **The Emunctologist should know that the Cleansing of the Colon, and a Healthy Diet is the first and foremost, and immediate Therapeutic-Hygienic measure for any such conditions, along with Osteopathic and Chiropractic measures. Hydropathy, Osteopathy, Chiropractic, Healthy Diet, Exercise, Light-Therapy (Using the Correct Colours): These Therapeutic Measures, in this order, are indeed those which are the Most Helpful, and Useful in obtaining immediate results. The seeker, should "Forget Not To Pray".**

The Clinical Work of the Munich Society for Light and Colour Research, in the 1920's, shows that Red Light, was used successfully in the Treatment of Diphtheria. The patient was dressed in White clothes, then placed under Red Light, and bathed in Red Water for between 1 to 2 hours. And a Complete Healing was obtained, after 15 days. Red Light Therapy, was also successfully used, in the Treatment of a patient suffering from: Complete Physical Exhaustion. Records from the Research Society, also show that Red Light Therapy, using light bulbs painted Red, where used in a successfully manner in the Treatment of Erysipelas (common bacterial infection on superficial layer of the skin, extending to the superficial Lymphatic vessels within the skin; characterized by raised, well-defined, tender, bright-red rash, typically on the face or legs, can occur in any part of the skin).

Ultraviolet Colour

1. Ultraviolet: Irritates the vascular nerves, the light is absorbed more quickly, with a strong healing effect.

2. Red violet works well against Epilepsy.

3. Silk worms grow faster under Violet light.

4. Violet was found to have a strengthening, and Calming Effect upon Severe Nervous Disorders.

Greater Benefit is obtained, with the simultaneous use of both Violet Light, and Violet Rays Therapy.

Colours Can Help to Transform Life

Buildings and Rooms should be specifically colour matched; to their purposes. Thus sociable rooms, should have vibrant, life, beautiful colours.

Colours enhance the purpose of the rooms and buildings.

Vibrant colours have a positive effect on depressed individuals, certain colours are uplifting, and help to create joy.

Also the use of Colour in Clothes, these have a great influence on the well-being of those who wear them.

For the right colours give zest for life, certain colour give increased self-esteem, increase the drive for activity, and are a source of joy.

Thus, we know that with the use of Colours, we can Help to Transform Life.

Colour Light Therapy & High Frequency Therapy

Nikola Tesla in 1891, was the first to suggest the use of High-Frequency Currents in medicine.

"High-Frequency Therapy is indispensable to physical therapy; and indeed to the entire field of medicine. Its development is closely connected to that of electrical engineering, which created the prerequisites for it. The first step on this long road was the generation of high-frequency alternating currents, after Nicola Tesla had designed the first high-frequency transformer in 1891.

A year later, the currents obtained in this way were analyzed by the French physiologist D'Arsonval to ascertain their suitability for use in medicine.

The method uses strongly damped oscillations, of very short duration, of a high-frequency alternating current.

The oscillations are interrupted by pauses lasting about 500 times as long as the oscillations themselves.

Joules's heat (generated in the tissues during the process) is, however, too weak to produce actual heating.

The effect of Arsonvalisation is essentially based on the superficial stimulus released by the transfer of effuvia and sparks.

Arsonvalisation was therefore used mainly as a means for stimulating the skin for the treatment of hyperaesthesia and paraesthesia, neuralgia of nerves located near the surface, and of local disorders of the blood circulation.

Since Arsonvalisation of the entire body has a certain sedative effect, it has also been used for the treatment of insomnia.

The resistance heat generated in the body during treatment with High Frequency Currents was used for the first time by von Zeynek (thermopenetration) and, independently of the former, by Nagelschmidt, who called this process Diathermy. The introduction of Shortwave Therapy in medicine depended on the manufacture of powerful generators.

In this connexion, the development of suitable thermionic valves by the Jena physicist Esau in 1925 was an important step forward.

Diseases of the Digestive Organs

In illnesses of the digestive organs, especially the spastically caused conditions of the alimentary canal and of the gall bladder, in addition to chronically inflammatory processes, can be considered for shortwave therapy.

The Beneficial Effect of Heat Applications in this area has been well known for ages. Spasms of the oesophagus, the cardia, the pylorus, the entire intestines and the gall bladder are treated with good results by shortwaves.

The same applies to Constipations caused mainly by spasms. Kiare reported recently on good results following High-Frequency Therapy applied locally.

Out of 108 patients suffering from an ulcus duodeni, 60% were relieved of their complaints, and out of 35 patients with an ulcus ventriculi, 54% were relieved. He used, however, a probe electrode specially designed for this purpose, by means of which he irradiated the stomach or the duodenum directly with a 1 metre wavelength.

Cholecystitis and cholangitis are treated with good results by shortwave treatment in the acute as well as in the chronic stage.

Frequently, the complaints are relieved as early as in the first treatment sessions.

A simultaneously existing obstructive jaundice is not necessarily a counter-indication.

Various authors also reported on good results in the treatment of chronic and epidemic hepatitis ,as well as liver cirrhoses (Rechou, Schliephake, and others).

Quite good results are obtained in the posttreatment of laparotomies, regardless of whether the complaints are caused by inflammatory residual infiltrates or adhesions. The same applies to inflammatory residual conditions in the area of the periproctium. Colica mucosa and especially nonulcerous colitis a respond well to shortwave irradiation.

The effect of chloromycetin can apparently be intensified thereby (Schliephake).

An attempt at Hyperthermy (elevate the temperature) of the entire body is recommended from the outset in chronic cases.

In almost all treatments in the area of the: Throat, Nose and Ears, all 3 possible methods of High-Frequency Therapy can be applied in principle.

Treatment in the condenser field, performed exclusively with air-spaced condenser electrodes, permits more intense irradiation of the organs located farther inside the body (pharynx, tonsils, sphenoid sinus), and also simultaneous treatment of both Highmor sinuses, ears, etc.

Diseases of the Teeth and Jaws

Diseases in the area of the Teeth and Jaws (especially inflammatory processes respond well to a supporting treatment by shortwaves.

This applies especially to chronic forms of osteomyelitis of the jaws, with and without fistula formation, perimandibular periostitis, and infiltrates of the floor of the mouth. In Preventive Dentistry, inflammatory processes and pains following root fillings, pulpa extirpations and pains in apical oedema formations are mainly the preferred indications for High-Frequency Therapy.

In the treatment of Neuritis, especially that occurring after inflammations or lesions of the mandicular canal through the dislocation of root tips, the application of an anaesthetic, which is limited in time, has yielded good results in combination with High-Frequency Therapy (Romanowsky and Stelter).

A Prerequisite For Success Is The Preliminary Elimination Of The Local Cause. Neuralgias in the area of the trigeminal nerve, or the so-called "'genuine trigeminal neuralgias" are therapy-resistant to a great extent, if any kind of heat therapy is applied.

Acute Arthritis of the temporomaxillary joints usually responds favourably to shortwave therapy. The same applies to all inflammatory irritations of the temporomaxillary joint which are due to Rheumatism.

Diseases of the Eyes

In the field of Ophthalmology as well, some diseases can be treated by shortwaves, with good results.

Although high-frequency therapy is usually indicated in this field, as well as in others, whenever any type of **Heat Application has Proved to be Successful, It Is Superior to the other methods in Many Cases, especially because of its Depth Effect, and the Increase of the Local Liquid Metabolism.**

This applies mainly to Diseases of the Rear Eye sections, which can only be treated directly by way of shortwave irradiation.

Gloz was able to observe an effect on the vessel system of the fundus as early as 15 to 30 seconds after irradiating the head.

Contraindications

In all Tumours, and Splinter Injuries of the eye, where the foreign body is still located in the eye, any type of high-frequency therapy is Counter-indicated.

The same applies to all diseases of the retina vessels with a tendency towards bleeding, bleedings of the retina and atherosclerosis of the retina vessels as well as glaucoma.

No treatments at all must be performed during Anaesthesia, and in all cases of sensibility disorders; otherwise overdoses may easily be given." - Dr Harald Thom, MD, in "Introduction to Shortwave and Microwave Therapy", 1966.

Physiologic Possibilities of Heat Therapy

"There exists today a better understanding of the Physiologic Possibilities of Heat Therapy, on account of discoveries in the field or radiation physics which have furnished new and perhaps superior methods in creating and localizing heat within the body.

Ultra- or super high frequency current, has been critically investigated on a large variety of material at different times during the past decade.

Studies of the confirmation that currents of ultra-high frequency definitely provoked deep heating effects, the intensity of which could be so regulated as to produce healing or lethal effects in living tissue.

Value have been the recent contributions by Whitney, Carpenter, Knudsen, Bell and Ferguson, regarding its physical and physico-chemical aspects, and King, Neyman, and their co-workers, regarding its clinical effect.

From the conclusions of all these reports it has been established beyond preadventure of doubt that **Fever Therapy as produced by High and Ultra-High Frequency Current definitely provokes favourable effects in certain Chronicities, associated with, or without, Allergic Phenomena, as also in General Paralysis of Insane, Encephaloid State, and others.**

Many other intractable conditions, are now under investigation by means of artificial fever therapy and is already, even at this early period, giving promise of favourable results.

That production of **Fever by High-Frequency Current is a superior method to that of infecting the patient with malaria or other organisms.**

It has furthermore given a new orientation in connection with the management of certain forms of Dementias which may be the starting point for a more vigorous offensive in the Treatment of the Insane.

Fever Therapy has been the Outstanding Contribution of High-Frequency Practice." - in "Archives of Physical Therapy", December 1931.

Applications For High-Frequency Therapy

"The application of High-Frequency Energy in Heat Therapy has the advantage of greater depth penetration, as opposed to simpler methods, such as packs, baths, infrared light, and heat cushions.

The endogenous heat that is formed triggers a series of Physiological Processes:

1. Producing a Spasmolytic Effect on muscles, tendons and other structures containing connective tissue,
2. Increasing the cell metabolism, and
3. The enzyme reaction speed and stimulating perfusion in the treated zone.

The capability of applying the high-frequency energy in: short, intense pulses (pulsed mode) can further increase the depth effectiveness, especially the stimulation of perfusion, while the heat generation is hardly felt in the skin, which is more sensitive to heat.

The applications for High-Frequency Therapy are diverse:

It is especially Effective in Treating Rheumatic disorders of the joints and muscles, inflammatory disorders of the respiratory organs, kidneys and bile ducts, and all disorders due to insufficient perfusion.

The pulsed mode is advantageous in the treatment of acute conditions.

In Gynaecology, High-Frequency Therapy is used especially for stimulation of resorption and perfusion in case of chronic adnexitis and non-inflammatory disorders in the lesser pelvis." - in "Operating Instructions Physiotherm-S", 8 April 2009.

What is High Frequency Therapy?

"High-frequency current is the collective name for high-frequency alternating currents. With alternating current, roughly the following occurs in a line. It starts with a weak electric current, which becomes increasingly stronger, then reaches a certain peak and finally slowly decreases to Zero; this process repeats. We call such a process a period. If this process repeats, for example 50 times per second, we speak of a current with 50 periods. We can also say: "the current has a frequency of 50 changes per second." The word "Frequency" therefore, "refers to the number of changes per second." If the Frequency is not, as example 50 per second, but approximately 100,000 or more, then we speak of a very high frequency. Thus, High Frequency. High-Frequency Current is therefore Alternating Current (AC) whose strength changes a very large number of times per second. If such an alternating current is passed through an electrolyte and the frequency is chosen high enough, electrolytic splitting will begin immediately after the change; however, because the current immediately changes strength again, this effect is reversed in the second half of the period. **It is striking that Alternating Current (AC), and especially high-frequency current, does not have a harmful effect on the body, unlike, for example, Direct Current (DC). Very high voltages can be used with high-frequency current without any harmful effects occurring, as occurs with low-frequency alternating current at high voltage.** This harmlessness of high frequency is certainly one of the main reasons for the extensive use of high frequency for healing purposes.

How Does High-Frequency Current Work?

According to Professor Dr Louis C. Barail, MD, DDS, the Physico-Chemical effect of High-Frequency Current is divided into 3 parts:

1. Mechanical Effect:

I. Beneficial effect, obtained through electroMassage, the spark, and the current;
II. Destructive effect, obtained through fulguration, w**ith the help of which germs can be killed electrically.**

2. Radiation Effect: The spark, and even more so the current, are accompanied upon their emergence from the electrode by the appearance of violet rays, which greatly increase their germicidal power.

3. Chemical Effect: The spark, and even more so the current, cause new atomic groupings in the oxygen in the air, transforming it into ozone, O3. The well-known antiseptic effect of Ozone is complemented by that of the Violet rays, which are produced simultaneously. Furthermore, the heating effect, which everyone can control for themselves, should be mentioned. **The result of this**

heating is increased blood circulation and an increase in lymph in the vicinity of the electrode. This, in turn, **improves the blood circulation** in the treated area. However, since we have a coherent blood and fluid circulation, **this local stimulation of the fluid flow must eventually reverberate throughout the body; ultimately, this results in a lasting strengthening of the entire fluid circulation within the organism.**

How Does This Work?

The increased, accelerated circulation of the fluids enables an improvement in the supply and discharge of fluids, a promotion of metabolic processes. The nutrients absorbed in the blood and lymphatic vessels are now transported more quickly to the organs, and the removal of accumulating and newly formed metabolic products is also carried out more thoroughly. These processes, so important for any healing process, are further supported by the increased Oxygen supply and the enhanced elimination of carbon dioxide and urine.

The effect on the kidneys is noticeable in increased urine output. From this list of effects of high-frequency treatment, its consequences are readily apparent. **One can understand that pain diminishes and disappears; An explanation is found for the promotion of healing from colds, inflammations, and suppurations. The improvement in general condition, the strengthening of the entire body, especially the nerves, is based on entirely natural foundations.**

The often astonishing results of High-Frequency Treatment are the entirely natural consequence of its effect on general bodily functions." - in "Gezondheid Genezing En Herstel Door De Hoogfrequente Stroom", 1929; also in Medical Weekly "Die Medizinische Welt", 1929.

High-Frequency Current

"A High-Frequency Current; is one characterized by the high number of cycles completed in 1 second of time. It is a modified alternating and oscillating current.

Alternating Current (AC), is an Electric Current, that Periodically Reverses Direction, and Changes its Magnitude Continuously with Time, in contrast to Direct Current (DC), which Only Flows in 1 Direction. The ordinary Alternating Current (AC), which completely reverses itself 120 times per second is known as a 60-cycle current.

It Requires:

1 (+) Positive Alternation, and
1 (-) Negative Alternation to complete 1 Cycle.

Positive Alternation; is the part of an Alternating Current (AC) waveform that shows a (+) Positive voltage or current. In a typical AC sine wave, this represents the half-cycle, where the current is flowing in 1 direction, as Opposed to the (-) Negative alternation where the polarity, and current direction reverse.

Negative Alternation; is the portion of an Alternating Current (AC) sine wave's cycle where the current or voltage is (-) Negative. Meaning it flows in the opposite direction or is below a reference point.

Electrical Power Source

The Alternating Current (AC), is the usual source from which a High-Frequency Current is obtained. When only Direct Current (DC), is available, a motor generator for changing it to Alternating Current (AC) is necessary." - Dr Burton Grover, MD, in "High Frequency Practice for Practitioners and Students", 1923.

Violet Rays

The Violet Emitters used in Violet Rays Therapy, are also called Violet Rays Generators; because they only Emit Electricity at:

1. Very High Voltage, and at;
2. Very High Frequency.

There Are 2 Types of Violet Emitters:

1. Analogue.
2. Non-Contact.

Colour Light Therapy & High Frequency Therapy; Have a Logical, and Sequential Relationship.
High-frequency Therapy requires, High-Frequency Apparatus, and its preformed with: Attachments called Electrodes.

High Frequency Contraindications and Precautions

> ***"High-Frequency Currents are contraindicated in all closed cavities containing Pus. Care should be exercised in the employment of any electric modality in the aged, as their organs are frail and very sensitive to electricity in any form."*** *- Dr Burton Grover, MD, in "High Frequency Practice for Practitioners and Students", 1923.*

In addition, any external signs that might point to the existence of contraindications (e.g. scars, etc.) should always be reason enough to ask the patient about contraindications!

Contraindications

“Non-exhaustive List of Contraindications, should always be observed when applying short-wave treatment for therapeutic purposes!

1. Always be sure to ask the patient about these contraindications, as not all contraindications are immediately recognizable by the therapist (e.g. pregnancy)!

2. In addition, any external signs that might point to the existence of contraindications (e.g. scars, etc.) should always be reason enough to ask the patient about contraindications!

3. As a rule, any short-wave therapy must be strictly based on an accurate diagnosis!

Absolute Contraindications

Absolute Contraindications to Short-Wave Therapy:

1. Patients with a cardiac pacemaker may under no circumstances be subjected to short-wave therapy. The effects of the applied high frequency on the pacemaker could cause ventricular fibrillation. Any other persons with pacemakers must also remain outside of the treatment area during the short-wave therapy!

2. Patients whose condition could be negatively affected by heat.

3. Patients with Tuberculosis.

4. Patients with Haemorrhages, or risk of haemorrhage.

5. Patients with Septic conditions, and Emphysemas (Chronic Obstructive Pulmonary Disease, that causes progressive damage to the air sacs (alveoli) in the lungs, making breathing difficult and leading to symptoms like shortness of breath, persistent cough, and wheezing).

6. Patients with malignant tumours, and tumours that are not yet identified. (Schneider in Elektrinedizin 7/62: Tissue and organ sections with inflammations, necroses, pus formation and abscesses. In such cases, the therapist must choose between the application of cold or heat in accordance with general pathological considerations, depending on the degree of inflammation. Inflammatory conditions that are still in “statu nascendi” are treated with cold. Inflammatory conditions with necroses and a cavitary tendency are treated with therapeutic means that generate heat and hyperemia. Chronic and unspecific inflammations are treated in the same way - heat and hyperemia - as this supports resorption, reparation and regeneration.

Specific chronic inflammations - such as tuberculosis - however, are activated by heat. Accordingly, they represent a contraindication. The same applies in the case of malignant tumorous conditions. Heat application in the case of a tumorous disease can only be regarded as malpractice. Moreover, cardiac congestions must be removed prior to any heat application).

Local Contraindications

Local Contraindications to Short-Wave Therapy:

1. Implants or metal inclusions (The higher conductivity of metals causes concentration of the field, producing a high temperature in the border area of the tissue. This in turn can cause excessive local heat, leading to (irreparable) third-degree burns. Therefore, caution is also necessary in case of long-existing metal inclusions, such as shell fragments).

2. Implants that could be impaired by short-wave irradiation.

3. Swellings that still feel warm.

4. Thermohyperesthesia.

5. Thermohypesthesia.

6. Acute inflammations.

7. Severe arterial obstructions (stage III and IV).

8. Gynaecological disorders involving acute inflammation (Further contraindications relating to gynaecological disorders include (see Mobius, Gynaecological University Clinic, Jena): genital tuberculosis, endometriosis, pyosalpinx or pyo-ovarium, tubal carcinoma).

9. Wetness, perspiration or damp bandages.

10. Permeating irradiation of the thorax in cases of severe heart diseases (heart valve diseases, myocardial insufficiency, myocardiac infarct, severe coronary sclerosis).

11. Pregnancy, since irradiation of the abdomen could cause teratogenous damage due to alterations of blood circulation and diffusion.

12. During the menstrual cycle.

13. Sudeck's syndrome, stage I and II.

14. Basedow's disease (irradiation could cause serious states of agitation).

15. Varicose veins (irradiation could cause congestive pain).

Warning

We would like to point out that it is advisable to post warnings for wearers of pacemakers in the rooms where high-frequency therapy (e.g. short-wave therapy) is applied. Moreover, a distance of at least 6 meters must be maintained between the unit and any low-frequency therapy that is being carried out at the same time!

Particular Importance

Particular care must be taken if the patient's clothing is wet or damp, since the garments may heat up faster and more intensely than the patient's body. Synthetic fibres (perlon, nylon, etc.) are characterized by low absorbency, which can cause the skin beneath such fabrics to quickly become moist. Therefore, it is recommended that the body areas to be treated be completely unclothed and the patient's skin dried, particularly where perspiration accumulates in folds of the skin. This applies especially when a higher dosage is being applied. There is no danger, however, when applying short-wave irradiation to bandaged areas as long as the bandages are completely dry.

1. When treating small children, particular care is obviously required, due to the low body weight. Very careful dosing and constant observation (manual checks of the skin temperature while the unit is switched off) are necessary.

2. Since the effects of high-frequency fields on unborn life have not yet been sufficiently researched, we recommend that operators who are pregnant do not remain in the immediate vicinity of the applicator when the unit is activated.

3. The output power must always be set according to the subjective response of the patient! Therefore, special care must be taken in case of patients with a diminished capacity for perception of heat (refer to section Dosage levels according to SchHephake on page 12)." - in "Operating Instructions Physiotherm-S", 8 April 2009.

Mode of Action of High-Frequency Currents and their Influence on Circulation

"According to Prof. Mann, the essence of the Effect of High-Frequency Currents is based primarily on the stimulation of a skin stimulus, that can be adjusted both by regulating the current supply, and by the more or less short distance of the electrode from the body part to be treated.

In addition, Heat generated in the tissue itself, similar to Diathermy, Can also be Considered a Therapeutic Benefit. Furthermore, the slightly increased blood circulation in the treated tissues is considered a result of high-frequency treatment.

The influence on circulation is probably also responsible for the fact that many patients feel more strongly stimulated after high-frequency treatment, which consists of stroking the extremities and back with the flat electrode and lightly sparking.

One can therefore describe such a treatment as well-advised for all kinds of Debilitating Conditions, Neurasthenic, and otherwise.

Likewise, in functional disorders associated with all kinds of discomfort emanating from the internal organs, such as cardiac neuroses, gastric neuroses, etc., it is justified to treat the corresponding parts of the body with mild high-frequency currents, based on a draining and circulation-regulating effect.

This treatment often has a beneficial effect, especially in Cardiac Neuroses." - in "Hoch Frequenz Fur Kranke Und Gesunde", 1930.

High Frequency Electrical Treatments

"The great clinician Professor Dr Mann has rightly complained that the German medical world has kept silent for decades about this research, from which so much blessing has come to humanity today, and which could have been a source of blessing for us long ago!

An Austrian doctor, an honest and wise researcher, **reports about his wonderful successes, in the Treatment of:**

1. **Sciatica.**
2. **Neuralgia.**
3. **Rheumatism.**
4. **Severe Tumours.**
5. **Etc.**

He was able to quickly and effectively treat patients who had been in hospitals for weeks and had tried everything. Many other doctors write to me similarly.

I have often Cured Sciatica in 3-5 treatments, and so have our doctors.

He sees that they are beneficial, and he can monitor their effects many times over and often make them even more beneficial through his experience.

A doctor writes to me that; he has used these currents successfully against:
1. Paralysis.
2. Calcifications.
3. Severe Neuralgia.
4. Etc.

Severe Skin Diseases and a persistent intercostal inflammation with sleepless nights were cured with them, and a Malignant Case of Acne Rosacea, and Purpurea (which had completely disfigured the patient's nose, so that he became a laughingstock because his nasal deformity was considered a drunkard's defect); improved considerably in a short time.

A teacher from the countryside came to me.

He had helped him and his family with all of life's major and minor ailments, protected his children from all possible health risks, and **cured himself of Sciatica in 3 treatments.** A number of letters confirm to me that people in remote mountain corners, **were able to relieve their Neuralgic, Rheumatic, and even Gouty Complaints on this place.**

How many happy people have been created by this, who can now walk straight and pain-free again and know that they have a reliable helper in the event of relapses in this procedure.

A nun had vocal cord paralysis after 3 goitre operations.

The specialists could not help her, and we helped her with extensive direct and indirect treatment. She was still able to sing in the choir in the evenings, and when she had a relapse after a few months due to overexertion (school nurse), **she took her appliance back in hand and made the illness disappear once again.**

A merchant had **3 unfortunate patients suffering from Severe Nervous Disorders,** affected children; the doctors in his area didn't know how to help them, and the man tried everything.

Finally, he came to us, **underwent a home cure; according to our instructions, and soon wrote to us the following:**

> ***"After a few weeks of regular treatment, the oldest boy seems to have made a clear difference. His muscles have become much firmer; he has gained great courage to try to heal himself. With his sister, who is too limited in her movements, at least the success has already been achieved that she can fall asleep very well in the evening, which is no longer the case as soon as we stop even for a day. The youngest boy also feels a relief when walking; as soon as we stop, he has pain in his ankle."***

Cures, or Significant Improvements in Paralysed Patients are often reported to us; these are usually Strokes as a result of Calcification. A gentleman who was a heavy smoker and had already suffered several **Minor Strokes is now cheerful and laughs at his former ailments, which he has now completely shaken off.**

In the face of such healings, can one still speak of imagination and superficial effects? **Isn't it rather quite clear how these currents intervene by liquefying the blood through their fine vibrations, gradually breaking down the blockages in the blood vessels and the various deposits?**

Simply through the Ozonization of the blood, that occurs during Radiotherapy, we remove waste from the red blood cell, and thus allow it to circulate faster. Will this aid, and explain why Visual, and Hearing Impairments Are Eliminated or Improved by the use of these Currents.

Almost, every experiment has been convincing!

By means of the Fine Vibrations, obstacles in the relevant organs are removed, and fatigue-causing substances, and the conduction pathways are freed for Visual and Auditory Function.

All of these Rejuvenation Processes brought about by the High-Frequency Currents, which also occur in a similar way in the Digestive, and Reproductive Systems, among others, were discussed in detail in my larger work on Rejuvenation (New Paths to Rejuvenation, Prof. Ewald Paul, "Neue Wege zur Verjüngung", 1926).

Conditions Treated by High Frequency Currents

Records published in the "Mitteilungen" Bulletin of the "Scientific Society for High Frequency and Light Research", Germany/Austria (from 1928 to 1933), show the following List of Conditions as Successfully Treated, by the use of High Frequency Currents:

1. **Acne.**
2. **Asthma.**
3. **Arteriosclerosis.**
4. **Brain Diseases.**
5. **Bladder Disorders.**
6. **Bone Neoplasms (tumour either: Non-Cancerous or Cancerous).**
7. **Cataracts.**
8. **Colds.**
9. **Consequences of Stroke.**
10. **Depressive States.**
11. **Ear Infections.**
12. **Ear Diseases.**
13. **Eczema.**
14. **Eye Diseases.**
15. **Fistulas.**
16. **Flu.**
17. **Flushing.**
18. **Gastric Descent.**
19. **Gonorrhoea.**

20. **Gout.**
21. **Haemorrhoids.**
22. **Hair (Sprouting Again).**
23. **Hay Fever.**
24. **Heart Attacks.**
25. **Knee Joint Injuries.**
26. **Lung Ailments.**
27. **Nervous Distemper.**
28. **Painfulness.**
29. **Paralysis.**
30. **Paralysis caused by Strokes.**
31. **Prostate hypertrophy.**
32. **Rheumatism; Severe Rheumatism.**
33. **Torn Ligaments.**
34. **Trigeminal Neuralgia.**
35. **Tuberculosis.**
36. **High Frequency Therapy has great success against Sciatica.**
37. **Etc.**

In Animals, the High-Frequency Treatment also works.

Records show great successes in both Horses, and Dogs ("Mitteilungen, Treasures of High-Frequency Therapy", 1928-1933).

Clinical Knowledge

"Soon after the start of vigorous treatment, symptoms often become noticeable that suggest rapid healing, but which very soon give way to a serious setback (Editors Note: the famous "Healing Crisis"). Thus, sometimes in those who have been paralysed for years, the ability to walk suddenly appears, only to disappear after several days. In such cases, it is usually patients whose inner driving forces have already been exhausted. It is only the last and futile endeavour of the life force, and therefore it is wise not to make any further attempts at force in organisms that are already exhausted, but rather to limit oneself to combating the individual symptoms, such as pain, insomnia, etc., which at least achieves something. The practitioner recognizes very quickly where all the effort is in vain and then abandons corresponding energetic measures from the outset in order to spare oneself and others disappointment. **We have collected knowledge upon knowledge, also learned to better evaluate inhalation with the help of high-frequency currents; we have seen some inhalations performed calmly, preceded and followed by a good, calm exhalation, even for several minutes, and repeated several times a day, have Very Beneficial Effects, even in cases of heart failure, calcifications, and old mucous congestion in the respiratory organs, as well as in cases of various fresh catarrhs.**

A simple inhalation can never achieve the success achieved with the

simultaneous use of high-frequency currents, which they reach the innermost depths of the respiratory organs, shake up the stubborn mucus, invigorate the blood, and disperse the essential oil used in the inhalation device everywhere, cleansing, purifying, and destroying germs.

I Have Seen Wonders Upon Wonders. Once, it was a case of a girl who had been Paralysed for 17 years, whose bronchi were severely blocked due to lack of exercise. A few short, but smoothly performed inhalations brought out old, hardened pieces of mucus, so that we were quite astonished.

And so I also used this method to stimulate blood circulation in cases of Obesity, calcification, etc., with excellent results. But you have to do it correctly, not, as some treatment instructions say: do 5 or more minutes of inhalation, because that is too much and does harm instead of good.

Or as the erroneous illustration in a manufacturer's treatment book teaches that one should grasp the wooden handle in which the inhalation electrode is inserted, which is nonsense, because the hand must be placed around the glass center of the designated electrode, because contact of the hand with the charged electrode generates copious amounts of Ozone, which, however, does not occur otherwise.

And then, above all, every inhalation should be carried out calmly; the calmer we are during treatment, the better it will benefit us.

Today's life and activity disrupt the harmonious functioning of body and soul everywhere; we are full of haste and restlessness.

The High Currents strive for, and achieve the return of rhythm and harmony to the subtle vibrations of life, but it is clear that they must work harder the more restless and disordered our body and soul's workshop appears.

So, if we place body and spirit in the most calm state possible, if we also allow it to cooperate from within with rhythmic-harmonic vibrations, through good, firm will; then the currents flowing in from outside will draw their circles even more easily into those of their needy, sick, or weakened organs.

Many experts confirm that one can truly work effectively with these currents, even on the finest structures of the human being, such as the eyes.

One of them, for example, states that his results in the treatment of eye diseases with frequency currents are good and numerous.

An expert writes that: For various types of Neoplasms (Tumours) on the eyelids, this treatment is better than all other methods, and that High-Frequency Currents offer unimagined relief for:

1. **Hardening.**
2. **Sclerosis.**
3. **Iritis.**
4. **Haemorrhages of the Choroid, and Retina.**
5. **Etc.**

However, no damage to the eye from such treatments has ever been detected.

I saw this in a case of iritis in a young man suspected of having tuberculosis, for whom specialist treatment had not helped at all, so that after a one-sided operation, the patient was simply left to his fate.

For the sake of scientific research, I then **performed several treatments** that, after an initial minor reaction (some pain in one eye), **showed quite astonishing success:** the patient saw better, no longer had the fixed gaze, and also felt more comfortable in the operated eye.

I would also like to mention **the case of Glaucoma in an elderly lady, in whom a few mild treatments, even indirect ones, resulted in a slight and rapid improvement.**

One can see that these subtle currents penetrate everywhere in an invigorating and purifying way, and that with them much more can be done with them than one might imagine.

With them, one can gradually reorganize the entire constitution, as we have seen in cases of serious internal ailments, and severe tumours.

The Path To Healing is clear to us: it means reorganizing the constitution, the innermost workings of the body; reinforcing the Endocrine Glands, on which more than one might think depends in the development of Cancer, to their proper functioning (See: New Paths to Rejuvenation; 1927).

If we succeed in this, the cancer cell, and any bacillus (that has not yet been proven to exist), will disintegrate into nothing.

That our Subtle Forces intervene helpfully, where the stronger ones fail is demonstrated by the fact that the so-called X-ray Carcinoma, can be cured using High-Frequency Currents, something that French clinicians only recently admitted again, after we had previously claimed. **We still face so many mysteries in this matter, and we must free ourselves even more, from our materialistic views, in order to then Be Able To Find the Correct Understanding of this Very Subtle Forces. Everywhere we look, Electricity, and probably Radium, are distributed in nature, among other subtle forces: we find them in all substances of creation, in tiny quantities, but as obviously indispensable ingredients; it is therefore assumed that: All Matter Also Consists of Electricity.**

One researcher calls our reproductive substances “material systems with a spiritual charge.” We do not yet know our most Secret Life Forces; but one thing is certain: They Are Subject to Electrical Oscillations of the finest kind, and that the smallest, most delicate cell of our Ego Exists in the Electrical Mechanism.

This also explains the miraculous influence of High-Frequency Currents on our entire well-being. The Cosmetic Benefits of High-Frequency Currents; also testify to their profound effect: large birthmarks, entire clusters of warts and sebaceous glands have often been removed in a short time and always without danger or actual pain. A man from Hamburg wrote to us, that he had **managed to make his battle scars almost invisible through Frequency Treatment.**

So you can see that **these Currents Also Have a Balancing and Regenerative Effect, Inserting New Cells.**

Treatment Instructions

Treatment Instructions, which in most cases have to be completely changed if one wants to achieve completely different results than before.

I must first note that we receive a great many inquiries requesting precise minutes for the treatment duration; the remark “as needed” doesn't satisfy people, and yet sometimes one has to say so. Because people are never the same, and neither are the devices, nor the current. There are devices that develop a very strong current from the outset, and others that work very gently. How can one come up with a template in this case? There are times of day when the power grid is well supplied, and strong currents quickly begin. And there are people for whom setting the appliance to low already allows for a good preliminary treatment, and for whom the need is completely met at the middle setting. So, your own feeling has to decide, and I therefore advise everyone to start with mild current and gradually increase it. Starting with strong current right away is rarely necessary. It is possible that, in a robust person and in a suitable case, such as severe ischia or rheumatic disease with heavy artillery to achieve the goal more quickly, but in general, we prefer mild treatment and thus achieve the same as with strong treatment — only that it may take a little longer, requiring a few more treatments, but this also has the advantage of never overstimulating the patient by using too many. I also like to allow 10 minutes of self-charging as a preliminary treatment for a day or a few days, for example, in cases of general blood and nervous weakness and similar conditions, and only then begin the direct treatment. **I also use the neon gas electrodes, mentioned at the end of our article, more often than before, because I have had good results, and they have served me well in inflammatory conditions.** For example, **for sore throats, the appropriate neck electrode with neon gas is good, and for eye problems, the special electrode designed for that purpose, etc.**

I also use Settisan (Robusta an ointment with plant extracts obtained from southern plants and mountain herbs, used as a cosmetic and nerve tonic), as a good helper, because this ointment strengthens the nerves and muscles, and the high-frequency currents get our body's machinery working more actively, but a more powerful machine also needs to be well-oiled.

One can also achieve one's goal without such an ointment, but it often provides a welcome relief and accelerates the treatment.

Never Overdo It

And “Never Overdo It” is the main rule!

We would have achieved much better results if so many people weren't prone to overdoing it!

Professor Dr Bier, one of the most important physicians of our time, recently said that it was fortunate that the sun doesn't always shine, because otherwise our dear patients would overdo it.

We have to keep the Polarity of things in mind: Placing Shadow Next to Light & Rest Next to Movement. I also saw much Better Results when patients always Rested a Little After Treatment. And for the same reason, I recommend a rest period every week or every 4 to 5 days; **the body will then be finished distributing and processing the absorbed energies,** and ready to receive new energies. **Everything Vibrates; in and around us, and from small causes, great effects arise. Our Body, and our Soul, Have Vibrational Abilities of which: few have any idea and now the new impulses of the High-Frequency Currents are joining them, giving the vibrations within us an ever-broader range of power, somewhat similar to the vibrations of a swing, which increase ever more through constantly renewed impetus.** From this example, one can also see that: **the fine and moderate vibrations, the gently working currents, can also lead to healing,** because they gradually move into an ever-broader field of action. **We must learn to regulate the Vibrational Forces in our bodies,** prevent their harmful effects, and use them only for healthy work. **This Commandment has never been more necessary than today, when, through overexertion of our strength in many things, in physical and mental work, and especially in sports, we have all too often lost control of the totality of our life vibrations**, so that **the impulses of the High-Frequency Currents with their invigorating and yet at the same time calming, because strengthening and ordering power, are true benefactors for humanity, as a whole and will be to an even greater extent.** Many examples can be given for a better understanding, for example, the well-known fact that the power of amplified sound vibrations can shatter glass as soon as it reaches its vibrating level. **And so, are the fine vibrations that we experience with the High-Frequency Currents into the body or unfold in it, capable of resolving serious disturbances within it, of stirring up old disease substances and flushing them out.**

Endocrine Glandular Functions

And now comes the important question of the so-called Endocrine Glandular Functions, about which much light still remains to be shed, and we ourselves have gathered much new, valuable observational material, which found its place in our work on Rejuvenation. There is no doubt that The Treatment of Many Illnesses, and States of Weakness would be far More Favourable if, in addition to local treatment, a general stimulation of the Internal Glandular Mechanism were also used. For the Connections Between these Glands (which influence the most vital functions), are so diverse that the stimulation of a Gland often creates the most complicated conditions and triggers disturbances where help was required and could be expected. On the other hand, the inhibition of all or the main ones of these Glands is of great value, and often produces surprising results in conditions where one would not have expected such results. By discontinuing such treatments, the usual treatment regimens gain a great scope, and must be supplemented accordingly if they are to be effective, and lead to better cures.

So Where are These Endocrine Glands, and How are They Treated?

First of all, we have the Thyroid and accessory glands (usually 2 on each thyroid lobe), in their functions considerably independent of the thyroid; 1 is usually located above, 1 below the thyroid lobe. By irradiating these parts as well, i.e., **the further areas around the gland, the internal secretion of humours, the regulation of Iodine, and other metabolic processes are significantly enhanced.**

Next comes the Thymus Gland, located in the upper chest, which sometimes grows down to the heart, but usually atrophies in young people. It presumably serves growth and blood formation, and has also been attributed an influence on the sexual organs. **I tend to irradiate each upper chest area frequently, which proves beneficial in conjunction with the treatment of the other glands.**

Next, I consider the Pituitary, and Pineal Glands, which I influence by irradiating the top of the skull for 1 minute, and the occiput and upper neck region for 1-2 minutes every other day with a mild, gradually increasing current.

A short irradiation (half a minute) can also be used occasionally.

Liver and Spleen

Now, we come to the Liver and Spleen, whose short (2-3 minutes) irradiation and (1-2 minutes) treatment are often very beneficial, as our experience shows.

Gonads

Finally, we have to consider the Gonads, and other tissues related to the reproductive process: Testes, Ovaries, etc., **which, with proper treatment, enable very significant changes in the organism.**

For many people, it is beneficial to enliven their abdominal organs of this type with a moderate current every other day for at least a few minutes.

Also 1-2 minutes of Neon Light. It is even better to irradiate the entire abdomen with Violet Light 4-5 times a week (a total of 3-6 minutes, depending on the patient's condition), and with gradually increasing current: the Pancreas, and the Intestinal Tract, and Gastric Mucosa are thereby promoted in their functions.

Short Radiotherapy can also be used here, i.e., a Violet Electrode raised about 1 cm or more, perhaps also the very powerful brush or the so-called nerve brush with its numerous extensions, for about 10 seconds, even minutes, gently moving back and forth over the entire area, but always at a suitable distance.

Naturally, never on a full stomach, but only 2 or 3 hour after eating.

In this way, we exert a strong stimulus on the basic cell, which carries its benefits far and wide. Zeileis has based his method on this basis; he stimulates with powerful electric shocks, which, however, cannot be applied with the same intensity to every patient, but requires variations. And by observing these subtle gradations, we make even further progress without frightening people, perhaps a little slower, but more safely and without the many injuries that are inevitable with such power operations. Nor do we need any radium additives, on which the investigations of real experts are not yet completed.

With our good Violet Neon, and Ultraviolet Energy (but without mercury inserts), and possibly energy in various colours, which still allow valuable colour forces to contribute, we achieve goals that could not be better desired.

In any case, the treatment of the stomach area, and its surroundings is of great value to many: we strengthen the solar plexus, which is often weakened or irritated in modern times. The Yellow electrode can also be used, for about 5 minutes in total, with one day's break per week.

Then, rub in with Settisan, which provides tremendous strength. In addition, the treatment of the kidneys and adrenal glands is valuable; one should Massage the kidney area in the wider area for several minutes 4-5 times a week.

Radiate and spark, exposure only for 10 seconds, maximum 15 seconds, starting with a mild current and gradually increasing to a stronger one. **Never more than 5-6 minutes in total and, if possible, spread over 2 exposures per day.** Through the kidneys and adrenal glands, we exert a beneficial influence, for example, on the eyes and the heart. The interactions of the glands with the internal secretion of vital fluids are, in any case, very significant and require further research.

In Many Conditions, it is Beneficial to treat the Internal Glands as a whole:

One then performs general treatment of the upper brain, the back of the head, the upper chest, the abdomen, and the stomach region (also the testicles in men), as well as the kidneys and surrounding areas, perhaps 4-5 times a week, for a total of 15 minutes, divided between direct treatment and radiotherapy (One can sometimes also work indirectly, which achieves the goal even more quickly). I will designate this treatment, which begins gently and gradually increases, with the Roman Numeral I.

Wherever this I appears, such a treatment should be applied.

If only individual Glandular areas are to be influenced, I place the initial letters thus:

S - Sex Glands (testes in men, ovaries and surrounding areas in women).
L - Liver.
S - Spleen.
K & AG - Kidneys and Adrenal Glands.
P - Pancreas (here the entire stomach and intestinal area is treated).
Thyroid - Thyroid Gland and accessory glands.
Th. - Thymus Gland.

Treatment should always be increased gradually, the most advisable duration being one that allows a certain degree of freedom of movement, so that one's own well-being.

Bladder Diseases of various kinds; Can Be Cured by High-Frequency Therapy.

Our experiences are not only very good, but also numerous, and many doctors who have followed our suggestions have been able to confirm this.

In cases of Bladder Inflammation, the treatment can be performed from the rectum, and from the urethra. There are cases where the urethra is too sensitive for the insertion of the urethra, and then rectal (anal) treatment is performed.

Prof. Dr med. reported that in one case where blood particles were passed with the urine, this had already improved after the first treatment and disappeared completely after the second.

Here, too, it had only improved from the beginning.

He initially gave 7-minute treatments, then one after the other day.

If necessary, treatments can also be given twice a day, but we then spend less time; a few 3-4 minutes are sufficient each time, but I gradually increase the current from medium to strong.

Like Prof. E., we have also been able to determine that urine almost always leads to rapid clarification, treatment was successful.

In fresh, inflamed cases, treatment from the anus is preferable; if necessary, the irritating neon ejaculation can be carefully administered from the urethra.

In old, chronic cases, alternate between the urethra and the anus.

In women, treatment is through the vagina.

Local treatment over the bladder is often very good; I also attach great importance to double-pole treatment from the front and back, and instead of these, the indirect treatment can be used at various locations.

Radiotherapy of the surrounding areas, intestinal relief, and Settisan rubbing also complement the treatment.

In cases of weakened bladder and involuntary urination, treatment is by strengthening of the lower back with application and rubbing, then the bladder area with applied surface ejaculation, better still, sometimes with amplified ejaculation, the bladder neck itself from the anus, and in cases of nervous irritation in the bladder area and in the urethra, ejaculation can also be performed from the urethra itself. One uses the relevant suction of the ejaculation, which is then well lubricated, and one will usually quickly be pleased with a good result.

Urethral and vaginal discharges find their conqueror in High Frequency.

Anyone who has seen it, what a skinful treatment in these areas, complains doubly that the German people have been forbidden from educating themselves about this subject by ill-considered legislation that serves the interests of a clique rather than the well-being of the masses.

A supporter of our cause experienced the following: A young police officer, comes to him in agitation, claiming that he has been infected, and through no fault of his own; he has used a tracksuit that he has hanging around among them and has thus **caught the Gonorrhoea. The doctor helps him with High Frequency.**

The discharge increases at first, but the pain disappears, and in a few days the young man is completely healthy. He said: Many of my comrades have been ill for such a long time, they can't be helped with injections; he's been in the hospital for almost a year and has completely deteriorated.

Now he asks quite innocently whether he can also send his friend to this wonderful treatment.

How do we treat this discharge?

We first shake up the old, clogged discharge with the Violet Hair Tube, and treat the fresh discharge.

As soon as possible, we treat with the anti-irritant and anti-inflammatory Neon Electrode, both can also be used alternately, first soothing and warming, then shaking with Violet Electrode, and then again with a longer Neon Electrode application.

After such treatment, we also rub the penis, and its surroundings thoroughly with Settisan, which brings new strength to the irritated nerve areas.

We also treat the penis externally with Violet Electrode if internal treatment is not yet permitted.

Furthermore, we should pay attention to Draining Intestinal, Leg, and Foot Treatments.

It should be noted that the Clogged Intestines (Constipation), exert a severe pressure on the genitals beneath them, and the blood that does not reach the legs, and feet remains trapped in the abdominal cavity and overheats it.

What has been said here about the discharge of men also applies to that of the female sex, which has taken on very alarming forms in both city and country and causes more devastation than one might imagine.

These discharges, and their incorrect treatment consume our best energies.

With Medical Trade Treatment: The Disease Is Driven Deep Into The Body, And A Host of Abdominal Inflammations Is Bred, Which Destroys Thousands of Women and Girls.

Our experience teaches us that: High Frequency Currents Protect, and that They Provide Miraculous Relief for Diseases of the Entire Uterine Cavity.

The Currents Penetrate Deep Into The Tissue, and Influence the Diseased Abdomen, in a way that Astonishes Every Doctor who has never tried such a thing.

The appendages of the organs affected by the inflammatory process of the discharge, can also be Beneficially Influenced, Dissolving Adhesions, and Producing Many More Miracles.

Parametric Pains, that “Medical Trade Specialists” couldn't cure, gave way to Brief Practical Treatment.

White Discharge (changes in the consistency, and smell of white discharge can indicate either a yeast infection or bacterial vaginosis), which affects over 80% of women, and the Malignant Gonorrhoea Can Be Treated Effectively with High Frequency, which is what the special Electrode is for.

Dr Hans Bauer, MD confirms the experiences of us, and our doctors that brilliant results are achieved with this procedure.

With White Discharge, the first session usually brings a pleasing reduction in the discharge, which then, in most cases, Disappears Completely After a Few further Treatments.

Patients who had previously been treated with all possible remedies, rinses, etc., and usually for a longer period of time, are delighted with the rapid, positive treatment. In both fresh and chronic cases. **You can see the same thing with Gonorrhoea.** Treatment with White Discharge, and Gonorrhoea lasts about 1 month; treatment is given 3-4 times a week. Usually, treatment with the Electrode through the external cervix is sufficient. Some doctors also recommend irradiating the uterine cavity with High-Frequency Current for catarrh that has penetrated through the internal cervix." - Prof. Ewald Paul, in "Advances in High-Frequency Therapy and New Treatment Guidelines", 1930.

Editor Note: This Book (Fortschritte Der Hochfrequenz Therapie, nebst neuen Behandlungs-Vorschriften, 1930), is in the German language, and it needs to be fully translated by a native German speaker. This book, along with all the therapeutic-hygienic books published by Prof. Carl Wilhelm Ewald Paul, are of an immense value in the field of Electro-Therapeutics. This book, also contains a Long List, with the Indication and Method of Treatment of Many Health Conditions which have been successfully treated by High-Frequency Therapy.

The Nature of High-Frequency Currents And Their Therapeutic Use

"In the Healing of Skin Diseases, Weakness, and Discomfort Disappear.
In addition to certain skin diseases and mucous membrane disorders, which is suitable for High-Frequency Treatment, with particular attention to the broad field of Nervous System Diseases, where this treatment method is particularly promising.

Regarding the Indications for Nervous Diseases:

It is to be used as a soothing agent for superficial skin irritations, itching, Paresthesias (a burning or prickling sensation that is usually felt in the hands, arms, legs, or feet, can occur in any part of the body, the sensation happens without warning, usually painless and described as tingling or numbness, skin crawling, or itching), neuralgia-like pain, skin hyperesthesia, etc.

The procedure is to apply the electrode firmly or lift it only slightly, so that only a warming effect or, at most, a very slight sensory heating irritation can be felt.

For neuralgic and similar pains originating from deeper nerves, stronger irritation with spark transfer can be applied in the area of the affected nerve trunks or the associated main parts.

The treatment is very appropriate for all Vasomotor Neuroses, although moderate skin irritation may result. This, combined with the generated warmth, often has a regulating effect on peripheral circulation and thus also provides subjective relief. Migraines should also be mentioned here." - Prof. Ludwig Mann, Broslau, in "Deutsche Meilizinische Wochenschrift", 3 April 1925.

Electro-Osmosis

Electro-osmosis or electro-endosmosis; is the motion of liquid induced by an applied potential across a porous material, capillary tube, membrane, microchannel, or any other fluid conduit.

"Electro-osmotic power, as the capacity exclusively peculiar to high frequency currents, which forces all soluble and dialysable bodies brought into contact with the tissues by osmosis.

Electro-osmosis is the therapeutic utilization of this capacity.

Electro-osmosis must not be confused with electrophoresis or with drug electrolysis; it is a physical penetration by osmosis without any activity of ions.

The amount of material absorption by electro-osmosis is equal to 5 or 6 times that of iontophoresis.

Electro-osmosis allows the material to penetrate as a whole without breaking it down, which is of great advantage.

Electro-osmesis can only be obtained under definite conditions of technic.

One must absolutely impose by 2 proper apparatus a completely cold current, in contradistinction to the diathermy apparatus whose resonator produces a hot spark of small faradization.

Slight faradization, however, is favourable and ought to act in common with the cold effluve.

If applied under other conditions, Electro-osmosis cannot but be either insignificant or dangerous, in conformity to the amperage.

Furthermore, in order to practice Electro-osmosis under best conditions, one must be able to regulate the voltage, amperage and frequency of the current, whence the necessity ensues to have three switching handles independent of one another on the apparatus.

The procedure is always to be carried out under contact, i. e., the electrode must be in intimate contact with the region to be treated during the flow of the current.

The material is introduced into the electrode cavity or in solution by a cotton plug or is spread on the wound in paste, whereupon the electrode is put on the paste.

Electro-Osmosis Is Indicated In:

Odontology, and Stomatology; in case of Rigg's Disease, Hyperaesthesia of tooth enamel, Periodontitis; it is the best procedure for anesthetizing gums and pulp. In Otorhinolaryngology, in case of chronic suppuration of the attic, papillomata of nose or larynx as well as for anesthesia before cauterization by galvanocautery or electrocoagulation; in ophthalmology in case of difficulty anaesthesias; **in gynaecology for prompt cure of vaginitis and cervicitis;** in dermatology in case of stubborn Eczemas and, provided that good antiseptic and soothing remedies are used, in painful dermatoses.

Lupus Tuberculosis Is Substantially Improved by Electro-Osmosis, with guiacol solutions, particularly when combined with Finsen-Therapy.

Beginning roentgen dermatitis, too, seems not to recur after treatment by Electro-osmosis.

All infiltrated parts must first be cauterized by means of Diathermy coagulation.

When most of the cells with large nuclei are destroyed, the whole surface of the wound is electro-osmisized.

This entails a regeneration process.

Especially in surgery atonic wounds are subjected to electro-osmotic Treatment by feeble antiseptic solutions." - Dr Louis C. Barail, MD, DDS, Professor of Electroradiology at the School of Dental Surgery and Stomatology, Paris, in Electroosmosis and its medical appliance, "Elektroosmose Und Ihre Medizinische Anwendung", Neue Medizinische Welt, April 1929.

Therapeutic Important Notes

During Colour Light Cure, with either Electric Light Appliances, or with the Sun, it is necessary to protect the Eyes of the Clinician and the Patient.

Also note that both the Mind and Body Need Rest (both the patient and the clinical must be with the right Mental Attitude during the application of treatment), and both, be at rest before treatment begins, this is also of fundamental importance, if one wants to have a successful outcome in the treatment.

Light, is to be Applied as Either:

1. General Irradiation.
2. Local irradiation.

Incandescent Lamps, Carbon Arc Lamps, Mercury Arc Lamps, Artificial Sunlamps, and Quartz Lamps are normally used.

The correct distance from the light source is also important.

In the Therapy with Colours, Coloured Glass Panes have an Excellent Effect.

The surrounding environment, and the use of Colours in furnishings, such as; colours of walls, ceilings, furniture, carpets, flowers, and all other furnishings, also has an effect upon the person.

The Cultures of Radiating Sand-Packed Bions

> *Reich used sand, heating it to incandescence then plunging it into a liquid culture medium. Bions were again produced, but this time much larger and less motile. He called these SAPA (sand packet) bions. He saw a very bright field around these bions which made him think they might be emitting radiation.* ***These Radiating Sand-Packed Bions (SAPA) were also found to kill cancer cells.***

"**If the radiation in question were directly connected with solar energy**, then many phenomena could be easily explained; e.g., the irritation of the eyes, the conjunctivitis, the rapid reddening of the skin, and its subsequent tanning.

I had conducted the experiments during the winter and early spring of 1939, had not been exposed to the sun, yet had a deep tan over my entire body.

I felt extremely vigorous, as "strong as a bear", and vegetatively alive in every respect.

Gradually, the fear of dangerous effects from the radiation disappeared, and I began to work with it without any further worry about protective measures.

There was no doubt of The Existence of an Energy Possessing Extraordinarily High Biological Activity.

It remained only to discover what its nature was, and how it could be measured." - Dr Wilhelm Reich, MD, in "The Cancer Biopathy", 1948.

"I am writing just briefly to let you know that the strange and contradictory phenomena at the static (leaf) electroscope are gradually starting to become understandable. **Our Mysterious "something" does not appear to be ordinary Electricity or ordinary Magnetism.**

But it influences matter in such a way that phenomena resembling magnetism and electricity manifest themselves at the electroscope.

Let me give you some verified observations:

1. Metals that have been influenced by the "something" (let us provisionally call it "orgonicity") attract the north pole of very sensitive magnetic needles.

2. Materials that are otherwise used to provide electrical insulation, such as rubber (gloves), hard rubber, glass, etc., are influenced in such a way that the leaves of the electroscope move even when the objects are held far away from them, and in certain positions this material attracts the leaves.

3. Using orgonized rubber, it is possible to charge the electroscope by slowly moving the rubber close to and then away from the instrument (repeating this procedure frequently).

4. In the presence of the orgone effect, an electrically charged electroscope slowly loses its charge.

The arrangement is as follows: electroscope plate I — SAPA culture dish — electroscope plate II, which has first been rubbed.

Once the electrical charge has become discharged, the charge deflection caused by the orgone is apparent when plate II is removed.

5. The electroscope can be alternately charged with Electricity and Orgonicity.

Orgone weakens the Electrical charge and vice versa." - Dr Wilhelm Reich, MD, in "Letter to W.F. Bon", 17 March 1939.

> ***"I am well aware of the fact that the human race has known about the existence of a universal energy related to life for many ages. However, the basic task of natural science consisted of making this energy usable. This is the sole difference between my work and all preceding knowledge."*** *- Dr Wilhelm Reich, MD, in "The New American Medicine", Journal of The Mindshift Institute, 8 December 2002.*

Correction of Colour Vision

The author has trained over 100 cases of patients unable to differentiate colours and has been one of the most successful in this field.

"Considerable interest has been shown during the past year in so-called "Colour Blindness."

This term seems to be misleading because there are very few who are really colour-blind. On the other hand, there are millions who are deficient in colour perception to a more or less degree. My experience in correction of this deficiency has been very gratifying and through proper training a very large number have been rehabilitated and accepted in the aviation corps who had been rejected due to poor colour perception.

The procedure is very simple and easily applied:

1. Step - We start with ten minutes of rotary training using displacing prisms creating a vertical diplopia. This training can be given on any instrument having a rotary action.

2. Step - 10 minutes exposure to the combination of colour represented by the Alpha and Delta filters of Spitler's Amblyo-Syntonizer. This is given on a slow flash (three second interval.)

3. Step - 15 minutes exposure to the Alpha plus Theta filters on slow flash.

4. Step - (not necessary in most cases) Mu (the "Mu Upsilon" filter is a combination used in syntonic phototherapy, a type of light therapy for vision problems and other conditions) combined with Upsilon filter to eliminate after images if the patient is bothered therewith.

This requires only 1 or 2 of steady exposure.

For those who do not have the above instrument the Alpha filter is a bright red (not ruby red), and the Delta filter is a colour between amber and orange, more orange than amber. Theta filter is a light yellow amber in colour.

Upsilon is a light bright Blue, and Mu, light bright Green.

The combination of these 2 filters produces a bluish-Green.

The light source is a 50-watt bulb, 105-volt for 120-volt circuit and both light and filters are used behind a frosted diffusion lens.

The average time required to complete correction is about 10 days.

I have completed some cases in 5 days, but those are the exception.

These are based on 1 training period per day.

Progress will first be noted in the inability of the patient to see charts which the colour-blind normally see.

As we continue training the patient will begin to see the normal charts.

I have often been asked if, after training is completed, normal colour-vision is maintained. I can only answer this by saying that so far as I know by checking on completed cases, they do maintain the efficiency developed and some cases improve after training has been discontinued." - in "The Mid-West Optometric Journal", November 1942.

Syntonic Phototherapy

> ***"Syntonic Phototherapy is a simple, non-invasive Light Therapy treatment that has been around for more than 70 years.***
>
> ***Syntonic Phototherapy uses specific light colours, frequencies and wavelengths to improve the body's regulatory centers in the brain.***
>
> ***When Light enters the eye, it travels through the brain to the Pineal Gland and the hypothalamus; the areas of the brain responsible for chemical and hormone balance."*** - *in "What Is Syntonic Phototherapy?", Optometrists Network, 2025.*

> ***"The Pineal System is the coordinating and integrating system of the body.***
>
> ***At the highest level; The Pineal System Co-ordinates and Integrates Spiritual and Mental activity with the Physical Body. It Is The Body-Soul Connection.***
>
> ***The pineal/Leydig gland axis is its core, which is called the "seat of the soul"." - David McMillin, MA, in "The Treatment of Epilepsy", 2019.***

Chapter 6

Light And Colours Therapeutic-Hygienic Studies

> ***"Empirical Hydrotherapy: so widespread in Greece, and especially in Imperial Rome, advocated by Pythagoras, Hippocrates, Celsus, and Galen, was given scientific therapeutic application by Vincenzo Priesnitz from 1829 onward.***
> ***Heliotherapy, so useful for stimulating physiological energies and reactivating the processes of assimilation and tissue renewal, has been successfully used in modern times for various forms of surgical tuberculosis and tubercular peritonitis.***
> ***Dr Sciascia from Canicatti (Girgenti) was the first to discover, in 1890, an instrument he called a "Photocautery", which, by modifying and calibrating sunlight, was able to cure certain diseases. He was the first to present his new treatment method on 14 April 1892, at the 13 Congress of the Italian Ophthalmological Association in Palermo.***
> ***Phototherapy: In 1894, at the National Medical Congress in Rome, he presented his paper "Phototherapy in Medicine and Surgery", several years before 1897, the year in which Finsen of Copenhagen first recommended the use of Phototherapy in the Treatment of Lupus. Therefore, the discovery of Phototherapy, now so widespread, is due to a Sicilian physician, not to Finsen, to whom it is erroneously attributed.***
> ***The various electrical manifestations applied with scientific gradation and measurement represent a thoroughly modern therapeutic aid, since Volta's battery, the pioneer of Electricity, was discovered in 1800.***
> ***Static Electricity: was first applied, of which John-Wesley was the main proponent. Then, galvanic current was used in therapy, and induced current, discovered in 1831 by Faraday, was widely used in medicine, first by Neef of Frankfurt.***
> ***And quite recently, thanks to the work of Arsonval-Thomson, notable therapeutic successes have been achieved with high-frequency currents, and with the studies of Mortoti and Merchell with sinusoidal currents."*** *- in "Compendio di Storia della Medicina", 1922.*

"In the Light and the Colours that arise from it; Enormous Powers Slumber, unimagined by the masses, even by our educated people.

Science has now begun to harness these powers for the general welfare.

Certainly, there have been few times in which such help was more needed than today, when the mighty battle of the wolf has profoundly affected the strength of humanity.

> ***"Light is the Cheapest and Most Effective Means of Destroying Disease."*** *- said a great physician.*

Recently, some of our medical staff, reported that they **were able to achieve brilliant Cures for Smallpox with Red Light, without disfiguring scars**, and Medical Councilor Dr O. Müller confirms this in the Munich Medical Weekly, 13 March 1917, and at the same time **presents his Remarkable Healing Successes in Treating Erysipelas, also Achieved with Red Light Irradiation.**

Incidentally, the distinguished Light and Colour researcher Dr Karl Wachtelborn also commemorates it in his work "Medicine on an Energetic Basis and the Law of Epidemics".

This book presents a great deal of hygienic knowledge, and is widely used by physicians in Jarbendingen.

And other experts from the Munich Society for Light Research, praised it for this reason.

"There must be a Mysterious Power in Red Light", writes Dr K. Sandrowski, a Light Therapist for 20 years, and ardent supporters of Light Research Society, **can tell of wonderful treatments with alternating irradiation of Blue, and Red Light.**

He **Heals Heart Neuroses with Light, and also Treats the After-Effects of Appendicitis.**

Medical Councilor Dr Breiger **presented a study on the Miraculous Effects of Light on Tuberculosis.**

Dr Breiger works in a similar way, has Dr Backer at his health resort Klinik in Riezlern (Allgau).

His work on **Open Air Sun Treatment for Bone, Joint, and Soft-Tissue Tuberculosis, is a truly classic work.**

And so, many more successes can be demonstrated, the disclosure of which is a duty to our people, as it shows them the ways to preserve threatened and build new strengths.

Above all, our leading circles can be served by summarizing the experiences of practitioners, and **the possibility of New Therapeutic, and Hygienic Measures can be opened up to our people.**

How many amputations would have been spared, how many flourishing human lives would have been saved, if certain hospital trains had been equipped with Light Therapy compartments, as Dr Sandrowski suggested.

How many thousands of our fighters out there would have been saved from serious physical injuries, from early death, if outpatient light therapy centers (powered light vehicles combined with Döcker barracks), had been brought to them, according to Dr Heusner's suggestion!

And how much blessing would have been offered by the Colourful design of those rooms in which our field grays, who have suffered from Nervous and Mental Illnesses due to war, are kept!

They, who are behind Chalk-Grey walls, despite all other care, recovered only slowly, and see themselves and their homeland deprived of precious time in their lives. **They would, in a colourful environment (as our experts experiments prove), Recover Quickly, and Recover in Body and Soul.**

From this perspective this present work was written; drawing on the experiences of prominent Light Researchers and physicians, and striving to transfer their findings to wider practice.

Should this Book succeed in opening up new Hygienic-Therapeutic Paths for Humanity, the author's wish will be fulfilled.

More than 30 years ago, I published a work on “The Healing Power of the Sun”.

It contained various suggestions that were intended to serve Science.

My research later led me to Italy, where I was able to study the Healing Powers of Light and Colours even more thoroughly.

I joined the ranks of the great Sun Doctor, **Dr Antonino Sciascia, MD, in Catania, who, in his seclusion in the interior of Sicily, performed miraculous cures on the peasants of his country.**

When I met with the leading minds of Italian Medicine, at the Hygiene Congress in Rome, I referred them to this great man, who was Niels Finsen forerunner, and succeeded in having him awarded some of the honours reserved only for Finsen (the Nobel Prize in Physiology or Medicine, 1903, was awarded to Niels Finsen “in recognition of his contribution to the treatment of diseases, especially Lupus Vulgaris, with concentrated light radiation, whereby he has opened a new avenue for medical science”).

I wanted to help pay off the debt of gratitude to a man, who worked selflessly for humanity and science, far removed from all cultural activity, and who also encouraged me to persevere on the path of light research.

Dr Sciascia demonstrated the powers of light in himself.

Standing tall in his 70's, he was still young, of a fine figure, without wrinkles, young in body and soul, full of that youthful enthusiasm that had distinguished him 50 years earlier.

The Medical Journal “Pensiero Sanitario”, describes him:

> *“Light was his Rejuvenator. That mighty radiance that fills the universe and speaks to us in the spirit of its geniuses.*
>
> *Like Michelet, he thought that* ***of all flowers, the human flower is the one that most needs the sun, and he wanted to use the sun for the benefit of the sick.***
>
> ***He also used it by condensing the rays and using his photocautery, a light-etching device, for localized illnesses, so that the light, as it flows to the diseased body tissues, would revive the body's defenses and destroy the pathogens through its antiseptic powers.*** *His first studies were presented to the Ophthalmology Congress in Palermo in 1892, on the Treatment of Trachoma (bacterial infection in the eyes) with Light Therapy.“*

Many Eye Patients, owed their Healing to this New Procedure.

Soon thereafter, he studied the effects of the various colours that arise from light, thus providing many physicians with the basis for important therapeutic successes. And tirelessly continued his work on: The Influence of Light on Various Diseases; Light Can Penetrate the Tissues of the human Body.

Using his invention Photocautery, he had splendid Success in Treating:

1. **Bruises.**
2. **Favus (skin condition).**
3. **Lupus.**
4. **Tuberculous Chest Fistulas.**
5. **Tuberculous Peritonitis.**
6. **Erysipelas (superficial infection affecting the upper layers of the skin).**

Dr Finsen, who used artificial light, and achieved good results with it, achieved without being able to achieve the cures and experiences of Dr Sciascia. But he achieved that fame, and fortune that was denied to the Sicilian explorer. The same happen to other champions of Light Cures, as Arnold Rikli, founder of Atmospheric Therapy, establishing the Natural Healing Institute for Atmospheric Therapeutics, **emphasising - The Power of Natures Healing Elements:**

1. **Sunlight.**
2. **Fresh Air.**
3. **Clean Water.**
4. **Physical Movement.**
5. **Nutrition.**

Arnold Rikli whose Sun Cures blessed thousands, of seriously ill patients and attracted enlightened physicians from far and wide; the master in the handling of solar forces, who knew how to dose them like few others!

A Maximilian Mehl (in 1889, a chance observation in Berlin, lead him to develop a new method of treating Lupus Vulgaris; with concentrated Sunlight), cured hundreds, upon hundreds of Severe Lupus patients, thanks to Light Irradiation in the simplest way imaginable, using a magnifying glass, and who astonished our professors with his treatments, who willingly referred their patients to him because they placed unlimited trust in Mehl's healing abilities, and for whom the Prussian State Government even established his own Healing Institute.

Finsen's study “On the use of concentrated chemical light beams in Medicine” (Om Anvendelse i Medicinen af koncentrerede kemiske Lysstraale), 1899, on the significance of the Electromagnetic Ion Cyclotron (EMIC) rays of light, and with this study, he was hailed as the inventor of Phototherapy.

However, he experimented with the effects of concentrated EMIC rays (Dr Sciascia's method), 7 years after the latter's discoveries.

Finsen knew that a humble Sicilian physician living in solitude was the true creator of Phototherapy, and he confessed to Professor Cirincione, who was visiting Berlin, that the credit for the discovery of the concentration of Solar, and artificial light rays belonged to Dr Sciascia. In 1902, Dr Sciascia published his work on Light Therapy "La Fototerapia", Rome.

"Phototherapy: A considerable literature is accumulating on this interesting branch of therapeutics, the most recent contribution to which that has come to our notice in a small book by Dr Antonino Sciascia, MD.

Dr Sciascia has invented a light condenser which he calls a Fotocauterio.

This he describes and figures. Also gives some preliminary matter pertaining to the general subject of **The Therapeutical Use of Light.**

But by far the greater portion of the book is taken up with accounts of cases in which he has made use of the Light Treatment.

The morbid conditions represented in his cases are rather numerous.

They include:

1. **Malignant Pustule (4 cases).**
2. **Facial Erysipelas.**
3. **Chronic non-febrile periodical erysipelas (crisipcia cronica periodica afebbrile).**
4. **Lupus Vulgaris (2 cases).**
5. **Tuberculous Peritonitis.**
6. **Orrhymenitis.**
7. **Tuberculogummatous Lymphangeitis.**
8. **Tuberculous Polyadenitis.**
9. **Chronic Pulmonary Tuberculosis.**
10. **Descending Diphtheritic Croup.**
11. **Whooping-cough (2 cases).**
12. **Lobar Pneumonia.**
13. **Typhoid Fever.**
14. **Puerperal Metritis.**
15. **Gastric Ulceration with Hyperchlorhydria.**
16. **Blennorrhagic Arthritis.**
17. **Chorea Minor.**
18. **Epilepsy.**
19. **Cataleptic Hysteria.**
20. **Acquired Deaf-mutism.**
21. **Hysterical Dysphagia.**
22. **Peritonism.**
23. **Tic Douloureux.**
24. **Sciatica with Exophthalmic Goitre.**
25. **Epithelioma (4 cases).**

As regards Malignant Pustule (necrotic lesion surrounded by blisters and edema), not only was **a cure effected in each of the 4 instances** recorded, but in all, has treated 28 cases, more or less grave, since 1890, and with invariable success.

Besides the **2 cases of Lupus here reported as cured, he has treated 14 others with the most brilliant results.**

In the case of Orrhynicnitis, in a young woman, there was effusion into the pleural, the pericardial, and the peritoneal cavities, and the disease had lasted for 40 days. The pleural effusion is said to have occupied 2/3 of the thoracic cavity.

The patient had Fever, her Nutrition was impaired, and she was Anaemic.

15 Applications of Condensed Light over the thorax and abdomen, each lasting 1 hour, and the treatment applied every other day, **produced a complete cure.**

In the case of Pulmonary Tuberculous disease, the duration was only 2 months and the physical signs were not positive, but the tuberculin test evoked a **decided reaction.** At the end of 40 days the symptoms began to subside, and 20 subsequent applications were **followed by a definitive cure.**

7 years have elapsed without a return of the manifestations.

The author thinks that like results may be expected in the pre-tuberculous stage, but that after that the treatment can only strengthen the natural forces, rendering the evolution less complicated and diminishing the likelihood of spreading the disease.

The patient with Ulcer of the Stomach was somewhat benefited, but the treatment was not followed to a cure.

In most if not all of the other histories recorded by Dr Sciascia **either Recovery or Decided Improvement Followed the Employment of Phototherapy."** - in "Phototherapy", New York Medical Journal, 11 October 1902.

More than 20 years ago, Dr Sciascia recommended the Sun Cure for bone Tuberculosis, and related cases.

Today, Sanatoriums have been established for this purpose, which bring great benefits and even permanent cures to such patients.

We refer here to Dr Backer's magnificent Spa in the Bavarian Allgäu, and to that of Dr Rollier-Leysin on Lake Geneva, among others.

Dr Sciascia was **the first to demonstrate that Light, in addition to its specific effect on the external components of the body, also triggers photocatalysis in the deeper organs, and body cavities.**

There, it brings about systematic physiological and biological activity.

How Light & Colour Therapy Achieve Its Effects

Through its Chemical-Thermal, Electric-Magnetic, Oxidizing, Antitoxic and Anti-Bactericidal, action. The Rays of Light, can Stimulate the Innermost Life, and Promote Metabolism.

"The Privileges of Radiant Energy are Tremendous:

1. **Chemical-Thermal.**
2. **Electro-Magnetic.**
3. **Oxidizing.**
4. **Anti-Inflammatory / Anti-Toxic.**
5. **Bactericidal.**

The Light Rays Stimulate the Innermost Life, Promote Metabolism, Accelerate the Exchange of Fluids through the Vascular Walls, and Promote the Accelerated Excretion of Carbonic Acid, and Greater Absorption of Oxygen.

Light Therapy also Helps us with the most serious internal ailments, the Excretion of Bacteria, and other Toxins, and the reduction of pathological blood pressure in the deeper organs, etc."

German science did not remain idle. Thousands of zealous physicians, inspired by earlier researchers, or by their own inner impulses, embarked on the new Therapeutic path and enjoyed unimagined successes.

At that time, I was experimenting with some Italian doctors on: **The Effects of Light on Typhus, various Venereal Diseases, and various Abdominal Disorders, and we were pleased with the Therapeutic Results.**

Varicose Ulcers

One evening, in Venice at the time, I was called to visit a neighbour, a woman in her late 60's, who was suffering from Varicose Veins, as the local doctor, who was a friend of mine, happened to be away.

After the usual treatment, I decided, in agreement with the doctor in question, the following day to use the Light Treatment on the Varicose Ulcers that were also present.

I had received the suggestion from a German physician, Dr Otterbein, **who had cured many Varicose Ulcers in this way.**

And **we were also successful, and saw the disorders disappear and the blood vessels smooth out within a short time.**

Some clinicians in neighbouring Padua even had the case demonstrated.

I would like to Emphasize that I recognized the Combination with Moving Air, as a Special Benefit of many Light Treatments.

Rikli, Dr Backer, Dr Heuser, **and many others were also aware of this.**

Therefore, **the confinement of patients in wooden, glass, and other boxes during irradiation is not always beneficial.**

This is also emphasized by an experienced supporter of our cause, a General Surgeon in the Prussian Army, who **achieved remarkable results in practice, and by moving the light source closer or further away, by placing white and coloured glass walls, the treatments are to be regulated accordingly.**

In this sense, some experts from our "Society of Light Researchers", also worked through experiments with a Coloured Glass Bath, with Vibrating Light, with their plans for coloured light showers, and rotating light sources, the latter in addition to the suggestions given by our corresponding member, the American physician and light researcher Dr Schmit.

Some work has already come very close to practical application.

A special eye shot in the increased light flood of sunbathing and related baths and irradiations also seemed important to us. Eyes and Mind require rest.

It is certainly not necessary to cover all those areas here, human ailments for which Light Therapy offers help, and indeed mostly surprisingly quick relief.

Nevertheless, a submission addressed by the light researcher Dr K. Sandrowski, MD, to the Society for Light Research may be included here:

Light Triggers Life Processes

"With reference to our discussion at the last meeting of the "Society for Light Research", I have the honour to emphasize once again that: **I have 20 years of Experience in the field of Light Therapy.**

I am gladly prepared to serve your good cause for the benefit of our brave army, and the general public. **The extremely satisfactory, in some cases unprecedented, successes of Phototherapy** entitle me not to doubt for a moment that you will earn the gratitude of the fatherland with your efforts.

The damages of the war, which it inevitably brings with it, can be repaired, the military strength can be regenerated, and invaluable human resources from the ranks of the war-disabled can be returned to the army if the successes of this therapy are brought to the attention of the relevant authorities as widely as possible.

Based on My Experience, I Classify Phototherapy as Follows:

1. Pure Helio-Therapy.
2. Artificial Sun Therapy.
3. Chromo-Therapy.

The Effect of Helio-Therapy is mainly from:

1. Blue.
2. Green.
3. Red.
4. Infrared.
5. Purple.
6. Violet.
7. Ultraviolet rays.

Light Triggers: "Life Processes" in the cells of our body, with which one can influence (i.e. increase or decrease) Health and Life Energy.

I consider Helio-Therapy, with its intensive effect, to be the most ideal form of application, simply because it has proven itself to be the victorious conqueror of the most terrible enemy of mankind, the Tubercle Bacillus.

The various forms of Bone and Joint Tuberculosis, which repeatedly recur despite surgical interventions. Tuberculosis of the soft tissues, with its seemingly incurable fistulas, has, without contradiction, found its master in it.

Its application is largely tied to:

Healing Factors of Eminent Healing Efficacy

Clean Air, High-Altitude Climate, and Location; but its Success with regard to Muscular Strength is of even Greater Significance. We possess Healing Factors of Eminent Healing Efficacy in the other 2 forms, even in the lowlands.

Helio-Therapy

Even here, we do not need to forego pure Helio-Therapy, and can use it, albeit with a lesser effect, as an auxiliary factor wherever we want to achieve:

1. **General Strengthening Effect.**
2. **Increase in Metabolism.**
3. **Increase in Red Blood Cells, and Hemoglobin levels.**

The vast array of Metabolic Diseases:

1. **Diabetes.**
2. **Arthritis.**
3. **Certain forms of Tuberculosis.**
4. **Arteriosclerosis.**
5. **Anaemia.**
6. **Chlorosis.**

Provide suitable targets for this.

Phototherapy

As for the second form of Phototherapy, it was born out of the desire to replace the effectiveness of **Helio-Therapy in its most effective agent: Blue, Violet, and Ultraviolet Rays. The current Quartz Lamps, known under the name "Artificial sunlamps", Have Proven to be a significant Healing Factor. Wherever it is important to achieve localized successes, long-lasting epidermal ablation, peeling and cauterization, etc., they have delivered commendable results.**

Skin Diseases

Many forms of; Skin Diseases, especially:

1. Acne.
2. Eczemas.
3. Alopecia areata and pityriasis.
4. Fistulas.
5. Ulcers.
6. Pruritus.

And the like; fall within their scope.

I have also frequently Achieved Favourable Results in:

1. Cardiac Neuroses.
2. Angina Pectoris.

The greatest field for their confirmation, however, has arisen during the current war period, where they are called upon to alleviate and shorten the suffering of our brave warriors.

Bactericidal Effect of Light

The Bactericidal Effect of their rays quickly sterilizes wounds, and closes them with soft scarring by accelerating the healing process.

The greatest potential, however, lies with the 3rd form of Photo-Therapy, possibly in conjunction with with the first-mentioned: Chromo-Therapy.

Even if the Ultra-Violet Rays, are less intense, we have another factor of considerable importance: Thermo-Therapy.

The often longed-for biological reaction through the appearance of skin pigment, which Finn attributes primarily to ultraviolet rays and which is probably based on the decomposition of the affected tissue cells as a result of protein coagulation, can also be achieved through Chromo-Therapy.

I have found that, for example, in hyperpigmentation, a strong pigmentation of the skin is not always a predictor of healing; indeed, relatively better healing processes have often been observed in less pigmented skin.

Experience has shown that; **the killing of bacteria occurs through the inflammatory tissue reaction caused by the light rays.**

Chromo-Therapy

In Chromo-Therapy, we have all the application forms that can be regulated as desired.

Among its colours, it is Blue and Red light in particular that achieve incredible results.

The Dual Effect of Light & Heat, has proven; Particularly Effective In Relieving:

1. **Appendicitis.**
2. **Peritonitis.**
3. **Tuberculous forms.**
4. **Localized Tuberculosis, especially of the joints, bones and their fistulas.**
5. **Gastric Diseases.**
6. **Intestinal Diseases.**
7. **Gynecological Diseases; among the latter, primarily diseases of the ovaries.**
8. **Metritis (Inflammation of the Uterus).**
9. **Fluor Albus (leukorrhea).**
10. **Cave catarrhal.**
11. **Gallstones.**
12. **Kidney Stones.**
13. **Leg Ulcers.**
14. **Eczema of all kinds.**

Red Light can almost completely prevent the suppuration stage, and its disfiguring scarring in Variola. Likewise, with timely and **Appropriate use of Chromo-Therapy: Diseases such as; Scarlet Fever, and Measles can regularly be positively influenced.** Chromo-Therapy Rooms, can be easily set up due to their simple and inexpensive setup; **they are indispensable in every hospital.**

The Effect of Red and Blue Light on the Psyche is well known:

1. **Red, has an stimulating effect.**
2. **Green, is uplifting.**
3. **Blue, in addition to its pain-relieving properties, has a strong sedative effect.**

A vast field of work is open to Chromo-Therapy, its scope is far from being explored and exhausted.

Let us no longer resist the recognition that: **Man Is A Creature of Light.**" - Dr Karl Sandrowski, MD, 18 February 1917.

In considering these, and other contributions from our medical members, we came to the decision to request something concrete for the army.

Here, Dr Sandrowski, with the approval of the other doctors, **proposed special Light Therapy compartments for certain Hospital Trains.**

Anyone, who knows how many severely wounded patients had to forgo the benefit of a bandage change during their return home, and were therefore handed over to the doctors in the hinterland in a sorry state understands what the proposed Light Therapy compartments would have meant!

Many lives would have been saved, many amputations avoided!

The blessing of thousands would have been assured, and therefore we should have striven with all our might to implement such beneficial measures.

Dr Heusner's proposal, also supported by our Society for Light Research, to send our own light healing centers behind the front, went even further.

Let us hear from Dr H. L. Heusner, MD, in Giessen, and Medical Councilor Dr Breiger, the successful Berlin Light Therapist, considered one of the most important Light Researchers in Germany:

Light As A Therapeutic Agent

"**Light Treatment**, as Dr HL. Heusner writes to us, has attracted the attention of a wide range of people in recent years **due to its surprising Successes in Treating a Wide Variety of Illnesses. We use Light as a Therapeutic Agent, either in the form of general irradiation of the whole body, or locally to irradiate specific disease sites.** Our main source of radiation is the Sun, but since it is only available to us for a relatively short time. Thus, we have learned to use artificial radiation sources for our purposes. **Here sometimes, we have obtained even better healing results than with the Sun, because we can combine them in a way that suits us, in each individual case, and use them for as long as we need.**

These Artificial Radiation Sources Are:

1. **Incandescent Lamps,**
2. **Carbon Arc Lamps, and, above all, the**
3. **Mercury Arc Lamp, which was introduced into our medical system 10 years ago.**

Blue, Violet and Ultraviolet Rays

We achieve Healing Effect With All Rays; But these:

1. **Blue;**
2. **Violet, and especially the**
3. **Ultraviolet Rays (which are invisible to the eye, and lie beyond Violet), are particularly powerful.**

If Ultraviolet Rays of Light affect unhardened skin (the sunlight by the sea is rich in them, in the high mountains, or on clear winter days with fresh snow), after a few hours a sensitive skin inflammation develops, which we know as sunburn or glacier burn.

This inflammation is caused by the cold ultraviolet rays of light.

Among artificial light sources, the Quartz Lamp, and the "Artificial Sun Lamp" created by the Quarzlampen-Gesellschaft GmbH in Hanau, are particularly rich in these rays; they have become an indispensable aid for physicians.

Due to its great abundance of Ultraviolet Rays, it stimulates the most delicate processes in the living cell, the smallest building block of our body.

Red and Green Rays

1. Red Rays.
2. Green Rays.

Also Have Great Healing Power, the same company introduced the Sollux supplementary lamp, which is particularly rich in these.

This is a fluorescent tube that emits a light equivalent to 3,000 candles, like a large arc lamp.

Artificial sunlamps and a Sollux lamp used simultaneously produce a general light bath that is close to the effectiveness of the sun.

Light Treatment in Skin Diseases

Light Treatment today is no longer exclusively relevant for superficial Skin Diseases that are easily accessible to light.

Most Skin Diseases, are cured more quickly with light, than with long and expensive ointment treatments.

The quartz lamp has also always been of great use in treating Hair Diseases.

Scrofula in children, a clinical picture closely related to Tuberculosis; Tuberculosis itself in its many and varied forms.

Tuberculosis of the Bones, Joints, and Glands, but also of the Lungs and other Viscera, is favourably influenced by General Light Baths.

The Healing Ray of Light has secured its place. In many cases, it has taken the knife out of the surgeon's hand; many a medicinal potion and many a pill, become superfluous where it is given Access granted in a timely manner.

Wound Healing Effect of Light

During the war relocations, **the wound-healing effect of light can shorten the sickbed of the wounded by many days, even weeks.**

Nervous Disorders

Even in cases of Nervous Disorders, and Weakness resulting from the Strains of war, recovery and strengthening of the entire body, was brought about in a short time.

With natural and artificial light baths, the overworked can provide themselves with stimulating refreshment.

In this sense, we must learn to make even more use of our Sun.

Air Baths with artificial light are almost as necessary for us as Water Baths.

We can achieve our goal most easily and quickly if we replace the sun with artificial light baths, just as we replaced the river bath with the bathing establishment.

These, as experience has taught us, achieve almost perfect results.

A nerve-refreshing relaxing light bath would also be beneficial in many cases for our field grays.

The relaxing Light Bath would surely soon become an indispensable necessity for a large part of the population, just as the Swimming Pool, or the Cleansing Bath now is.

Especially for the city dweller exhausted by the rush of the day, for those who work mentally or physically, but especially for the worker who lacks the time and means for excursions into sunny surroundings, the artificial light bath, which is available at any time in summer and winter, regardless of the weather, would be of inestimable value as a means of refreshment.

Even the weak child's body can be protected from impending illness, and Made More Resistant to all kinds of Health Damage, by Light Baths.

The great social significance of light baths with artificial radiation sources, which are accessible to the public, is readily understandable.

Not only do we restore to the state a large number of those otherwise permanently afflicted with Tuberculosis, especially those threatened by or already suffering from it, as productive workers, thus potentially saving them a stay in Sanatoriums, hospitals, etc., but **we also Protect the Healthy from various illnesses,** and ensure their continued productivity.

Therefore, we should make much more of the light.

If we give Light the Importance It Deserves, we will always find in it a Reliable Helper to Increase the Strength, and Performance of the Healthy, and to Improve and Heal the Damage, inflicted on the health of our people." - Dr Breiger, MD, Berlin.

Light As A Therapeutic Remedy

We could only agree with these words of an expert, and it was clear that our Society for Light Research, which had set itself such high goals, had to embrace these humanitarian plans.

We welcome Dr H. Heusner, Professor Jesionek's assistant, a Light Researcher from whom the world can expect much.

His work on **"Light as a Healing Agent"** (Das Licht als Heilmittel), which appeared in "Prometheus", 1917, and other scientific journals, has also had a positive impact on broad medical circles.

Biochemical Effect of Light on Living Cells

He spoke on the **Biochemical Effect of Light on Living Cells:**

> ***"Changes are induced in the Cells exposed to Light, which Influence the Vital Processes within them. If a part of the body's cells is stimulated in this way, e.g., those of the skin, not only do changes occur in them, but neighbouring cells are also stimulated via the blood and nerve pathways. This allows us to explain why Light Rays not only affect the affected cells, but; in general*** *sunbathing,* ***the metabolism of the entire body is stimulated, including those organs that, located within the body, are not directly accessible to the Light Rays."*** *- Dr H. Heusner, MD*

Precaution

Light Triggers Life Processes; in the finest building blocks of our body, the regulation of which allows us to exert a powerful influence on health and illness.

In this way, we can (through the supply of Light), Increase or Decrease Life Energy, and cause harm through excessive and one-sided use.

In Light Healing, we know that everything has 2 Sides.

This polarity also applies, and especially, to light.

The great Sun Doctor Rikli knew this, and another practitioner, who, as General Surgeon of the Prussian Army, zealously promoted Light Treatments, expressed a similar view.

The patient's distance from the light source, the type and intensity of the light, and many other factors, such as proper rest, which is actually only emotional regeneration, and appropriate nutrition, all of this works together to bring light treatment to its peak.

Beautiful Light Therapeutic Results can be achieved next to, and behind glass walls, even coloured ones.

That general practitioner tested this, and we ourselves can confirm it.

Great things are being achieved with artificial light sources by some modern practitioners, but this does not prevent them from being misused here and there.

People forget that the actual Light effect is often the best, and they try to achieve great results with large doses.

Jesionek, Heusner, and many others Achieved Miraculous Results With These Therapeutic Remedies.

A lady on Lake Starnberg suffered from Erysipelas (an infection of the superficial layer of the skin).

The Doctor treating her, who knew nothing about Light Therapy, had to be called to duty, and his Deputy immediately used **Artificial Radiation, which Cured the woman in 2 Sessions.**

“The illness must be drawn out quickly”, he said, “otherwise it will drag on.”

How many people could be helped in this way if they could find the right path right away?

Light is more than is commonly believed:

It Is Force, Matter, and Space.

Light Dynamics

That we bathe ourselves in light, anyone can experience the power of recharging oneself with new strength.

Return home from a sunbath feeling spiritually refreshed, and work with greater air quality than before.

The resistance of the German soldiers in Africa to wounds, the surprising healing of even the most serious cases, has already amazed many of our doctors.

The people are saturated with light forces, solar accumulators.

If you take the time to read the Reports from the colonial doctors about this, you will have to believe in Light Miracles.

The light that streams into our bodies affects their substance and motive power.

Anyone who thinks about it without prejudice cannot ignore this realization.

And the exposed areas pass on the forces developed in them through the exposure to the areas that remained in the dark – inward.

The Red and Yellow rays cause blood congestion in the affected organs, “hyperemia”; the Ultraviolet rays, achieve a similar effect by stimulating the gluteal nerves.

However, we should note the difference between the 2 phenomena: the irritation caused by the heat rays appears almost immediately, while that caused by the cold (ultraviolet) rays only appears after hours, even days.

The latter also fades more slowly, while the former disappears more quickly.

This demonstrates a tremendous difference in power between these, and those rays.

The Faster-Oscillating Ultraviolet Rays Are Absorbed More Strongly; they thus give the body's cells a more powerful impulse, and thus Have a Stronger Healing Effect.

The Red and other heat rays, on the other hand, will drive the Life Juices (The Lymph and Blood), more quickly through the body, but this alone is not enough.

The preparatory work must be done by the Ultraviolet Light Forces, by putting the cells into a more receptive state, and adapting their internal metabolism to the new Blood Life. Thus, better Treatments will be achieved with Mixed Light, than with the exclusive use of one type of light.

Every practitioner confirms this; such as Dr Sandrowski in his successful Goiter Treatments, which he achieved by alternating Red and Blue Irradiation, and many others.

Greater Blood Flow increases the sensitivity of the cells that make up the body.

Through light, we also influence the blood and allow the antibodies (antigens) that form in it to reach the area where the body is threatened more quickly.

Light brings about an increase in metabolism, and an increase in the amount of energy and defences in the blood.

Knowing this is especially necessary in order to be able to use light; as a wound healer.

The Wound Healing Process Is Magnificently Influenced by Light Irradiation

> ***"The previously seemingly dead tissue awakens to new life, under the influence of the light beam. And the faster the beam oscillations occur, the more intense the stimulus the cell particles experience. Initially, when the vital activity of the cells is still completely suppressed as a result of the damage suffered, where it can only react sluggishly, rapid and sudden bursts of short-wave (Ultraviolet) Rays are needed to awaken them to new life. Later, slower vibrations, Red Rays, Promote Further Healing Processes in a milder way."*** *- Dr Heusner*

How little people today know about the effects of light is demonstrated by the fact that so many fall victim to Strokes year after year, while it would be a small matter to avoid this danger.

Orange-Yellow neck scarves, hat and helmet linings of the same colour would make a splendid impression.

Have you already thought about protecting yourself from harmful light rays when staying in southern regions?

To preserve it, an officer in the tropics had tested this simple method and had his helmet covered with such a snare. His friends laughed about it, considered his idea "suggestion", secretly removed the snare, and (lo and behold), the man had quickly healed his helmet damage. And couldn't we also adopt similar snare measures at home during the summer for young and old?

Dr A. Krüche, the editor of the "Ärztliche Rundschau", tireless champion of light knowledge, and the utilization of light forces for the well-being of our people, also joins us.

Colours Are Transformed Light Forces

We have now considered the Effects of Coloured Light, and pointed out its use for Hygienic and Therapeutic purposes:

"Colours Are Transformed Light Forces, Stored Solar Energies." And with these words, they have become more widely understood as sources of strength and healing. Only the simplest observations are needed, to understand the Health Effects and Healing Powers of Colours.

I referred on the outrageous fact that our warriors, thrown off their mental balance by the shocks of battle, are kept in chalk-gray walls behind barred windows, instead of being raised in **Colourful Surroundings and led to faster healing.**

Hundreds of thousands could be restored to health, and thus fitness for service in often surprisingly short times through rational Chromo-Therapy.

How much more can still be observed in matters of Colour Power is shown to us by a wealth of further suggestions from our members.

An expert points us to the fact that in Holland, skylights made of coloured glass are commonplace and usually larger than ours.

These almost always square skylights, **in which Yellow is particularly popular, have an incredibly beneficial effect on the residents, and are likely a contributing factor to the extraordinary nervous strength of the Dutch.**

This became clear to me since the moment I became acquainted with the work of Professor Babbitt, and other **Coloured Light researchers, who taught me to see special powers in the different colours.**

For example, to recognize Yellow as a special source of strengthening the nerves.

Certainly, there lies primal power in that race itself, but equally so in us.

This power is increased through the correct choice of colours.

We, for our part, also conducted very good experiments with colours on a wide variety of patients, especially those who were depressed in their nervous and emotional life.

Now we know, that almost all patients are affected in their mental sensations by their physical disorders, just as, on the other hand, emotional states can be considered causes of illness.

This proves that the correct Adjustment of the Colours of our Environment is a Stimulus, a Strengthening, and can be a First-Rate Remedy.

We saw that some people came alive in a certain colour environment, and that spring colours, especially cheerful tones.

My suggestion is to Surround the Mentally Ill With Cheerful Colours.

Dr Engineer Halbertsma, the great Dutch Light Researcher, reported that they had furnished rooms in spring colours in hospitals, in which soldiers whose nerves had been damaged by "Shell shook", from a nearby grenade, they recovered quickly.

And they had also had excellent experiences in Insane Asylums, with differently coloured rooms, confirming what had been established in the reports of our Society, and by qualified experts.

We had observed that our glass painters became Irritable, and unwilling to work when working in Gray rooms, and on Gray objects.

But were in a Good Mood, and more Cheerful when working in Yellow rooms, and on Yellow glass.

It was not uncommon for one or the other to **Fall Asleep when painting on Cold Cobalt Blue.**

We saw an old lady, whose **bedroom was decorated in Gray tones, and faced north, lose the Bad Humour** she had always displayed upon waking. When she moved her bed into a room decorated in spring tones, facing east, and receiving the sun through a magnificent Yellow silk curtain, which porous like human skin, **scattered the blessing of light far and wide. We saw that Overstimulated People Could Sleep again with Yellow-Green hues on the bedroom walls, a Blue ceiling, a Blue hanging lamp, or a Blue lampshade.**

> ***"Blue induces Sleep, Yellow Strengthens the Nerves, Red Excites."*** *- says an old Colour Scientist.*

Is it really so much to ask of our neurologists, and psychiatrists that they create rooms in different colour combinations, and test their effects on their various patients, after we, through our experts, have preceded this with such successful experiments. More Doctors and Hygienists, are joining our efforts and recognizing that with Chromo-Therapy, the Study of Colours, a new, humanely beneficial science is emerging.

Colour-Therapy in Epilepsy

When some time ago, a patient afflicted with Jackson's Epilepsy (Jacksonian seizure is a type of focal partial seizure, unusual electrical activity), the disease that usually leads to early death or mental insanity, wrote to me that when he had recognized the **Strengthening Influence of Colours on his shattered Nervous System.** The man, due to his profession as a civil engineer, was often out of the area. Whenever he was riding his bike along the country road and felt an attack approaching, he would hurry to a meadow, striving to land as softly as possible if he fell. **One day, as he cast his gaze upon a Flowerbed, he realized that his attack quickly subsided.**

Repeated experiences of this kind then prompted him to approach the matter systematically, to decorate his home with colours, and to test them on himself.

And I must say that the man sent us material from which science can derive much. But practitioners of the artisan trade and building experts have also approached us: the decorative painters have, in their magazine, headed by Mr I. Leipfinger, who is well-versed in matters of colour, compiled a wealth of experience with the colourful decoration of human dwellings, based on our work, and have just dedicated a special memorandum to this **highly important subject, which places Colour Hygiene at the service of the decorative painter as a new and beneficial field of work.**

The realization that Colours can no longer be introduced indiscriminately into the spaces in which people live and rule, but that we must adapt them to our disposition, our needs, and our living conditions, and that with colours we can influence our moods, and our work capacity, slowing them down here and stimulating them there, is increasingly gaining ground.

> ***"Create Colourful buildings, bring the joy of Colour to our cities, to our large and small settlements."*** *- Bruno Julius Florian Taut, renowned German architect, urban planner and author*

(Taut was distinguished by his devotion to colour. He applied lively, clashing colours to his first major commission, the 1912 Gartenstadt Falkenberg housing estate in Berlin, which became known as the Paint Box Estates. The 1914 Glass Pavilion, an illustration of the new possibilities of glass, was also brightly coloured. The difference between Taut and other architects, was never more obvious than at the 1927 Stuttgart Weissenhofsiedlung housing exhibition, in the contrast of pure-white entries).

We must bring new light, new joy of colour to the masses, spare no effort in this endeavour, and instil it in the youth, even the youngest.

Even if it doesn't yet understand the values of colour, it still feels them; it re-infuses itself with the sense of beauty.

The understanding of colour and the joy of colour retreated before what we call culture, which in a certain respect was merely degeneration, and fled to the common people; to those who spent their lives in sunlight, in nature, in the mountains, or by the sea.

Truly, our eyes must become accustomed again to Nature's most beautiful gifts, its treasures of Light and Colour, which can bring us a new blossoming of life, a more joyful time.

The English Physiologist Foxton recently pointed out the certainly distressing fact that civilized people, in furnishing their homes, decorating their homes, and even in painting various everyday objects, are increasingly inclined toward certain dull, almost expressionless colours, such as Gray-blue, Dark Brown with Green, and similar combinations that are reminiscent of reminiscent of dull cloud shades, yet having nothing in common with the luminous splendour of sunny nature.

More vibrant Colours were dismissed by many, even the most educated, as unpleasant and tasteless, and were often mocked for reflecting the aesthetic sensibilities of the less civilized rural population.

The eyes of the simple, naturally living person function more naturally than the optic nerves of the cultured city dweller, which are subject to far greater strain and often degenerate through overexertion.

Dust, soot, the bright light of electric lamps, the hustle and bustle of city life all cause damage to the eyes of civilized people, which we must counteract through Colour Hygiene.

The English scholar also sees the decline in colour appreciation among civilized people, as a sad sign of degeneration, which only proves that our sense of sight has become so nervous and pathologically sensitive that it can no longer perceive strong colour effects.

This is where the Hygienist, Education in School, and at Home must come into play.

A Berlin expert, who is a member of our society, recently pointed out the strange fact that rooms intended for social purposes are kept in Gray instead of being given friendly, invigorating colours. As a practitioner, he has now taken it upon himself to make a transformative impact in this sense, and it is said that he has convinced, and satisfied all his patients.

I now want to recite some of the Letters of the Epileptic mentioned earlier, who, with such great joy and perseverance, studied the effects of colours in order to harness the powers of colour for his severe suffering.

Indeed, he succeeded in overcoming severe periods of suffering by properly harnessing the powers of colour, which are still so mysterious to humanity.

Healing Effects of Colour Irradiation

"Right at the start of the war, I, a severe Epileptic, was given command of 24 men.

Nevertheless, I persevered, and what remedy did I employ?

The officers mess was located in a village pub, which, had windows made of coloured cathedral glass.

At the same time, there was an old pilgrimage chapel on the construction site, which also had colourful panes in the windows.

If I felt unwell during the day, **I would simply retreat to this chapel for a short time, and pray to my Saviour!**

I was always helped!

In the evening, I always sat near the brightly coloured windows of the Inn, and was able to prepare my reports with fresh minds, so that everyone generally said: This seems suspicious to us, because at first he pretended to be plagued by **Epileptic Seizures, and since we've employed him here, none of us has ever had the opportunity to witness a seizure!**

I didn't even know at the time who I actually owed my healing to.

According to my explanation above, only 2 remedies can be considered: either Prayer or the Effect of Colours.

For my part, I naturally claim both, at the same time!

After all, the unbeliever who denies the power of prayer, must admit that the healing effects of colours cannot be denied, or he belongs to that class of people who cannot be convinced by any means, even if they have had the corresponding experiences first hand!

After a few weeks, I was sent to Fort Neumühl, near Kehl in Baden.

I became seriously ill.

I also lacked all the Remedies mentioned above, such as Coloured Glass or Flower Carpets.

So it happened that in less than 2 weeks I became so Gray that even the deputy officer sent a report to the Strasbourg Fortress Hospital, on the basis of which I was immediately discharged. I was given quarters with colourful windows, located in the middle of a beautiful park.

While marching to my new position, I suffered a severe seizure in Strasbourg.

A colleague, immediately had me taken to the Pub opposite.

This restaurant also had colourful windows, and since my colleague already knew from earlier how soothing the colours were for me, he had me brought close to a **Violet-glazed window, which happened to be intensely illuminated by the sun, bathing the entire room in Ultraviolet light.**

After 10 minutes, he had the desired result: I got up without any help.

In my neighbourhood, I had seen glass panels hanging in the windows of a living room with beautiful, colourful still life's.

I thought of decorating the window in my living room as well.

I placed my large camera at my window in such a way that, with the magnifying glass open, the entire landscape could be seen on the glass plate in the camera. One evening, I removed the glass plate from the camera and closed the curtains, but had not removed the camera.

When I awoke up in the morning, my room shone with a beautiful gold light from the rising sun, I stayed in bed, because that was precisely where the sun rays captured by the lens of the camera were projected.

Never before have I gone to work so cheerfully and happily.

Now I assert with certainty what I still could not have known: that nothing else may have influenced my transformation other than the Colour Irradiation.

In Hamburg, the colours only affected me in my room at night, and kept the attacks at bay, while during the day, I saw no other colour than the gloomy, tar-smeared walls. In Wilhelmsburg, I had the most beautiful landscape, thus keeping any influence of colours on my mind at night!

These are surely compelling evidences of the Healing Effects of Colour Irradiation.

I remembered that as a schoolboy, **I always felt dizzy every time I tried to climb a leafless tree**, which, as a forester's son, I not only often had the opportunity to do, but was forced to do on Easter.

Hardly, for example, **when I reached the end of a walnut tree trunk that had lost its leaves, I had to turn back and couldn't climb any of the branches,** which had at least a circumference of 40-50 cm.

However, if the same tree had leaves, I dared to climb out to the thinnest branches, even when they were already bending under the weight of my light body weight, without feeling the slightest dizziness.

I climbed firs, and pines to the very tip in every season, as long as I could see the green canopy, which, especially with pines, only begins at a considerable height, so that my eyes could rest on a colourful spot.

It is surprising that here it was not the density of the canopy, but rather its colour, that prevented the feeling of dizziness that usually arises so easily and quickly.

When I climbed a Poplar (Liriodendron Tulipifera), which certainly had no dense branches to cover my back or obstruct my panoramic or distant view, only if it had green leaves did I get off without a dizzy spell.

I was always able to climb a solitary pine, which had a very pleasant needle system but remained Green year-round, despite its usually very tall trunk, without that dizzy feeling.

And the same was true of the balcony railing.

I had flower boxes installed around the railing, filled them with garden soil, and then sow it with Nasturtiums and Carnations.

After a few days, a magnificent Green appeared, and now I could step onto the balcony or stay there as long as I pleased without any feeling of anxiety or dizziness. One glance at my flower boxes, which had become colourful with all sorts of planted flowers and was mainly Green, was enough to see that after too long staying on the balcony, the dizzy feeling that occasionally arose was immediately relieved.

The colours, and the colours again, and again, had such a soothing effect on my mood and my frayed nerves." - Mr. V., Report 1

Healing Through the Effects of Light and Colour

"In almost every report I have sent you, I have spoken about how I first came up with the idea of using your method of **Healing Through the Effects of Light and Colour.**

I have also described to you the lasting healing successes that should not be underestimated.

I have recently been applying your method to myself, and others, and how things are going with me personally.

As the son of a good Christian family, I have always fulfilled my religious duties here in the city of Hamburg, and have followed the instructions given to me by my dear mother: "Pray and work!".

One day, I came across the life story of St. Valentinus.

Among his miracles and healings, I was particularly interested in the healing of an Epileptic Prince.

St. Valentinus took his colourful cloak, spread it out on the ground, and placed the prince, who at that moment was thrashing about in violent convulsions, on the cloak. Then he knelt down in prayer beside the sick child, and made sure that it could not fall from the bed.

The result, as it is further reported, was achieved after just a few minutes.

The child became calm, and after St. Valentinus repeated this several times, no more seizures occurred. Be made aware of this, and even these well-intentioned suggestions only resonated with me once I was sufficiently convinced by the Institute for Colour and Light Research, that my efforts could be successful in this regard. As far as I know from my coloured depictions of holy images, such as abbots, etc., wore a cloak or cape of Ultraviolet fabric, lined inside with Crimson silk. I was fortunate enough to be in possession of a large plush rug, which mainly featured these 2 colours (Ultraviolet & Crimson), and from that day on, I had it spread out in my living room.

Coincidentally, the attacks stopped for a few weeks. To my friends amazement, they no longer had the opportunity to see me collapse! After trying the new healing method 3 or 4 times, I was so firmly convinced of its healing power that I went to Berlin over the course of a few weeks, I encouraged other people to imitate my method. The sun's rays were caught by the console mirror placed on the opposite wall and distributed throughout the entire room. This coloured light had such a soothing effect on my overstimulated nerves that after just a few minutes, I felt better, and I could leave my room again without having to lie down on the existing carpet, without having to fear that the suppressed attack would subsequently flare up. **I had the best success with the friendly Red-Violet, which colour I always used, and with it achieved the results noted today."** - Mr. V., Report 2

We have recently received confirmation of this observation from many sources, including from medical circles, and Dr Arno Krüche, our honourable chairman, has stated in his "Medical Review", one of the medical world's most progressive journals has taken a position on this matter.

These are facts that medical science can no longer ignore.

The question of Chromo-Therapy has 2 aspects, arising from the Psychological, and Physical-Chemical Effects of Colours.

It is curious that leading figures in medical science still have no understanding of the latter, even today, when so much clarity has been achieved about the general energy of light in various fields of human activity, and dare to reject it outright.

The reference to the flourishing of plants in light, and the latter's powerful effects on the earth does not disturb them.

Humans Are Not Only Thinking Beings, But Also Visual Beings

Dr Peipers, who years ago already endeavoured to stimulate interest in coloured light and its use as a medicine to promote:

> *"For, what determines our actions in Climato-Therapy are, first and foremost, the* ***more favourable light, and thus also Colour conditions of high-altitude stations and southern health resorts. These certainly play a significant role in the beneficial influences on the patient's psyche.*** *But c****olours also play a role in the physical-chemical effects of the high mountains and the south."*** *- Dr Peipers*

However, we will first emphasize the psychotherapeutic applicability of colour and, in a later discussion, return to the other side of the question, the physical-chemical one. Dr Peipers, in his work as a psychiatrist, had accidentally **recognised the effects of colour on the mind,** and scientifically developed them. Later, he applied his research to other areas of pathology, concluding that there are only a few cases where valuable help cannot be provided by Colour Treatments.

Humans are not only Thinking Beings, but also Visual Beings.

Anyone who wants to grasp the whole, reach into the depths of the soul, and influence it, and with it the entire body: Must Cultivate not only Thinking but also Visualization.

Dr Peipers refers to the artist, who is our model here, and shows us the paths we must take.

He brings his thoughts to the human being, with the help of the senses by clothing them in Colour and form, and thus reaches the deeper layers of consciousness more reliably and triggers impulses of will through feeling and imagination.

A Therapy that calls upon the human being's Normal Conscious Faculties, has made similar progress; systematic use of artistic means is its purpose.

And in practising such Therapy, the physician is faced with an immense wealth of means offered by nature and art.

He must choose the right one from their diversity, case by case, and if he is able to gather and control the treasures that lie around him, he can render great service to the establishment of Physical, and Mental Balance.

Mental and Serious Physical Disorders

Enormous are the possibilities that lead to recovery within this framework, and it must be repeated, **Can Cure:**

1. **Mood Disorders.**
2. **Mental Suffering.**
3. **Serious Physical Disorders heal themselves in this way.**

Many and respected Therapists who have already achieved special laurels in this field, confirm this to us. This is the case with the American Professor Edwin B. Babbitt, whose great work “The Principles of Light and Colour”, 1878, with its 203 magnificent illustrations, including beautiful colour plates, can inspire confidence in anyone who wants to gain strength from Colour Therapy. Admittedly, Babbitt had not yet brought himself to embrace Goethe's Theory of Colour, but certainly not because he lacked insight into it, but rather because he had no opportunity to gain knowledge of it. Only educated within the framework of a Newtonian view of colour.

Through the Study of Light and Colours

> ***"Light and Shadow exist in Equilibrium in Nature; day and night balance each other out throughout the world; just as positive and negative forces must be equally distributed if they are to produce a perfect effect. Through the Study of Light and Colours, a whole new world opens up to us. Colours reveal to us the true dynamics of nature and humanity, and extremely powerful inner principles of forces that reach into the realm of the mysteries of mind and matter. Many conjectures thereby become science. Thus, nature develops the force and effect of life by causing one extreme to enliven another, and yet to keep another in balance. The protoplasm assumed by physicians to be the beginning of all life would be utterly powerless without higher and finer principles. We must ascend high along the line of the finer until we reach the region of the unlimited spirit."*** *- Dr Edwin Dwight Babbitt, MD*

Dr Babbitt also understands how to correctly play out the contrasting colours and how to allow cold, and warm colours to interact with each other.

Professor Babbitt argues that where there is too much Red or inflammatory conditions, Blue forms the balancing principle, while Orange-Yellow represents the great enlivening principle in Hard Tumours, and other inert conditions.

Therefore, his Blue chromo-lens, and the Orange chromo-lens are more effective in many cases than mere translucent lenses.

He used several practical instruments for healing through colours.

Such as the Chromolume, a device in which various glass rods are arranged according to their chemical and physiological properties and adapted to the various human organs. He calls his Chromo-Disc "better and more powerful", in which the corresponding coloured light acts through a lens on the affected organ in question, and to which the inventor owes good results.

He uses this instrument, which we have, incidentally, superseded by more practical inventions, for Nervous Excitation, Inflammations (of all kinds), Fever, Acute Pain, etc. For this purpose, the Blue glass disc is the most suitable; but Indigo Blue is also suitable. If the illnesses are still nervous, without inflammation and are sluggish, then place the Blue glass so that the white sunlight can shine through. Jerner used this instrument to stimulate the arterial blood, against cold feet and hands, etc. Red glass is particularly excellent for this, especially in combination with Yellow glass, which radiates even greater warmth.

Furthermore: To invigorate nervous blood, stimulate the stomach, liver, kidneys, etc., purple glass is best. Incidentally, Yellow glass is often also used for the liver, and intestines. Our physicians also tested the strengthening powers of colours according to Babbitt's instructions. Thus, according to Babbitt's instructions, yellow proved to be a stimulant for the digestive organs.

An elderly gentleman suffering from constipation drank water that had been standing in the Sun in a Yellow drinking glass and subsequently regularly stool, which he previously only achieved with Senna Leaves (laxative).

One should therefore investigate such things with experiments and not simply dismiss them.

Four Cases As Examples of Healing's Using Blue colour

1. Severe Pulmonary Hemorrhage: A lady suffered from severe pulmonary hemorrhage. As a result, she became very depressed and feared for her life. Blue glass panes were hung on the window in front of which she usually sat. She had to position herself so that the blue light rays fell on her neck and back for an hour every day. On the second day, the effect of the sun's rays was too strong, so that the patient absorbed "too much Blue light" and, as a result, felt a peculiar sensation in her throat and back and an unpleasant heaviness in her head. This feeling subsided the next day, when the exposure to the blue light was shortened. She immediately gained strength, and her cheeks began to colour the next day. After a week, she felt better than ever. Of course, she was not cured of her lung disease in this short time; only the chest pains subsided and her well-being improved. After another week of exposing herself to the blue light for a few hours a day, red spots appeared on her neck and shoulders: proof that this treatment had drawn the diseased blood to the surface of the skin. Professor Babbitt criticized this case, remarking that it was wrong to claim that the patient had absorbed "too much Blue light." On the contrary, too little Blue light was absorbed, as the white sun's rays had merged too closely with it. The **Blue Light** should have been extended over the head and the entire body, for 1 full hour.

2. Cerebrospinal Meningitis (inflammation of the brain and spinal cord): A lady from Cairo, Illinois, suffered from this disease for four years and, according to a letter from General Pleasanton, was freed from her suffering only through the use of **Blue light**, without any other medication.

3. Head Neuralgia: A merchant with severe neuralgic headaches, he exposed himself to a **mazarine-Blue Light** for 30 minutes and then felt completely clear in his head.

4. Rheumatism: Dr Robert Roland in New York writes: "A year ago, I exposed a man with Severe Rheumatism to the rays of blue light, which I shone on him through **2 Blue Disks**. After 15 minutes, he felt so free that he could walk without pain, but he complained of a metallic taste on his tongue. Another patient of Dr Fincke in Brooklyn also felt a taste in his mouth like verdigris as soon as he shone Blue light on his hand."

NB: This is consistent with spectral analysis, as the blue of the Jraunhofer lines detects Oxygen, nitrogen, barium, magnesium, chromium, nickel, copper, zinc, strontium, cadmium, cobalt, aluminum, and titanium. The 2 patients mentioned above must have been very sensitive, i.e., highly endowed with psychoether.

The calming effects of Blue, and especially Violet, on insane people have been confirmed by Dr Ponza in Alexandria and by physicians in French asylums.

Contraindications

However, this Light should Not be Used on those who are:

1. Apathetic.
2. Melancholic.
3. Withdrawn.

Dr S. Pancoast, MD, demonstrated the Healing Power of Red Light in a number of cases in his work **"Blue and Red Light."**

A few are mentioned here:

1. An 8-year-old boy had a slow recovery period from a dangerous case of **Diphtheria,** during which paraplegia (paralysis of both legs) suddenly developed, so that the boy could not walk and could only stand by leaning on a table or chair. They dressed him in all white clothes, placed him in a **Red Bath** for 1 to 2 hours at a time, and then exposed him to the **Red light of the sun,** causing him to soon fall asleep and sweat profusely. After 3 weeks, he was able to walk, and after 2 months, he was completely healthy, 2 years have passed since then without a relapse.

2. Complete Physical Exhaustion. M. R., 45 years old, had overworked himself early in his career in business and had gotten into financial difficulties. His body and mind suffered greatly. He could neither sleep nor eat with any appetite, and he was overcome by **complete depression.** First, there was pain in the back and head, which was soon followed by shortness of breath, anxiety, rapid pulse, and loss of appetite followed. **Treatment was initiated with this Red Bath**, and no significant effect has yet been observed in any patient. Even the first bath was successful and had a strengthening effect on mind and body. It was initiated cautiously, but the longer duration of the bath could be used.

Mr R. recovered quickly, even though he continued to run his business.
The first thing was that he got a refreshing sleep, sat with a greater appetite, and his kidney excretion showed a normal appearance.

> ***"The Red Colour can also have harmful effects if used in too large a dose or in an inflammatory condition. Just as iron is contraindicated in inflammation, Red should also be avoided in sanguine temperaments."***

The Yellow Colour, especially when supported by Orange and Red, forms the central principle of Nervous Excitation, and has a Purgative Effect. Tartarus Stibiatus (made from stibine), a white crystal powder, is strongly developed with Yellow, Orange, and Red when examined for its elements in the spectrum.

Another patient reports:

> *"I have applied the new experiment with the* ***Yellow Light, and am extremely astonished by the results. I found that water in a Yellow Glass, exposed to the Sun, has a definite Laxative Effect. Consumed in small doses, it has an extremely mild and Uplifting Effect on the Mind. It is most miraculous. The Yellow Light has, I note with gratitude, Revitalized Me."***

Babbitt explains; Yellow as Harmful In Certain Irritable States, such as:

1. Delirium.
2. Diarrhea.
3. Insomnia.
4. Palpitations.

Yellow is Beneficial in:

1. Sleeplessness.
2. Paralysis.
3. Constipation.
4. Colds.
5. Chronic illnesses.
6. Sluggish Ulcers.
7. And the like.

Yellow predominates in most poisons, such as potassium cyanide, strychnine, etc., the Yellow principle predominates as a nerve stimulant, and mixes with the Red principle of the stimulating blood.

> ***"Finding the right material to obtain the relevant healing colours is very necessary, because the colours visible to the eye are not decisive."*** *- Dr Babbitt, MD*

3. For Example: **Cobalt melted into glass produces a dark and fine Mazarin Blue, but has an imperceptible Red.** Examined with a prism, it shows Blue, Indigo, Violet, green, Orange, Red, and several thermal (positive) colours. **Such glass is therefore unsuitable for healing purposes because it contains too much carbon. On the other hand, Blue glass made from sulphate of copper oxide is quite excellent.**

Likewise, Red is the hottest colour, therefore it does not transmit as much heat as Orange or even Yellow glass. Each glass must therefore be manufactured according to its luminous power, because the eye deceives us. **Blue and Violet glass Are The Best for Inducing Sleep in Nervous People.** It is the most cooling of all colours; and when produced, as mentioned above, with copper oxyammonia sulphate, it best serves its medicinal purposes.

4. Violet glass (made with manganese) suppresses almost all Yellow; the Red is thereby greatly diminished; Green shades into black, and all other rays blend with Blue. Red glass (created with Gold) blocks all thermal rays and penetrates slightly into the Blue spectrum. Yellow, pure Yellow glass, is obtained from coal. Obtained from iron, Yellow allows the thermal colours to shine through, namely some Red, Orange, strong Yellow, small streaks of Green, and some Indigo. Hence the subtle tonic effect of iron. Many other coloured glasses are also in use.

> ***"Incontrovertible facts suggest that Blue, Indigo, and Violet have Electrical (calming) Effects."*** *- Dr Babbitt, MD*
>
> ***"Ordinary Electricity and Magnetism both develop indirectly through the sun's rays, while terrestrial or earth's electricity emanates from minerals, metals, trees, animals, and humans. Electricity is the principle of cold, but it can generate the greatest heat through its chemical action with thermal substances. Likewise, Blue, Indigo, and Violet contain the cold principle of the spectrum. Thus, greater heat can be generated through their combined action with thermal colours than can be achieved with red alone. Proof of this is the experiment of General Pleasanton in Philadelphia: by placing Blue discs on top of white ones, the thermometer in his greenhouse rose to 38℃, while the external atmosphere was only 2℃, i.e., only slightly above freezing. According to chromo-chemistry, Blue light rays develop great heat when they come into contact with thermal solar rays. But blue and violet cannot generate heat in and through themselves because they are electrical; this can only happen through chemical interaction with warm substances or when bent into magnetic curves."*** *- Ferner*

Here we have the opportunity to release New Sources of Healing and warmth through the skilful interplay of Colour Forces.

In any case, Babbitt deserves the credit for having scientifically tested the healing effects of colours in large-scale practice.

He also recognized that **Rays Are Transformed Light Forces:**

> ***"Differently coloured liquid solutions, even wallpaper, furniture, and clothing, can have a healing effect through their colour quality."***

He also recognized that special powers lie dormant in vibrating light.

All Therapists who wish to enter this Important and promising field of Healing are therefore Advised to Project the Colour Rays onto the Body In Vibrations. It is not simple, smooth illumination that is decisive, **but the Powerful Effect of the Vibration. The still air that surrounds us, has no such significance for the body as the moving air.**

This influences our physical being, to a far greater extent, than the static atmosphere, from which our skin receives only weak stimuli.

The same is true of Light. The skin, too, has its systole-diastole, its constantly alternating modes of activity, its ebb and flow.

A particularly sensitive part of the skin is the light-sensitive retina, which is highly susceptible to Colour Light Vibrations, and opens the gates to our physical being.

There is no doubt that **Chromo-Therapy, applied in this way, will achieve even greater achievements** than those already achieved by individual Therapists.

Artificial Coloured Light Treatment, the application of the intermediate rays of Ultraviolet, and Red Light, will achieve new successes by oscillating these rays. The American physician Dr Emmet, and the Russian Dr Snegirev pointed out in professional publications in 1879 and 1884; the healing influence of the sunbath on many abdominal ailments and similar symptoms. One can now achieve surprising healing results in a wide variety of conditions with such light-soaked tubs. **Suggestions are being made in our circles to equip the sunbath with coloured light powers, and to have a tub made of cast glass available for coloured light treatment. The light can also come from below. All-round exposure of the patient in such a tub is Allow treatments that would astonish even the masses of doctors. For very few people have a true idea of what the application of general light energy means for the sick and exhausted.**

With such treatment aids, a true rebirth is possible.

The tub should be usable at any time with the help of artificial light sources, and it is important that the patient is not simply illuminated, but that the coloured light energies are projected onto the body through vibrations.

Just as calm water and calm air do not provide the same benefits to the body as if these forces were set in motion, so too is the light and the colours obtained from them through resistance. The vibrations revitalize them to a great extent, and with rapid results, which make it our duty to put this treatment into general use as quickly as possible, coloured showers could also be combined with this sun or Coloured Light Bath. The Chromo-Therapists Dr Scrivanich, and Dr Peipers described this idea to me as a fortunate one.

One channels the colours of the spectrum into a water jet, and in conjunction with the latter, conveys this entire splendour to the patient.

One will be amazed at the invigorating effects!

To understand the effects of such things, one must know the founder of the general Systole-Diastole Science, Professor O. Rosenbach.

He teaches us that every energy has a dual character (work and reverse work).

Tension and Relaxation work within the body in each of its individual parts, and in the larger external world.

The functions of the nerve pathways are also tied to such an up and down.

The same up and down of the skin's life is a necessary complement to this.

A current of Tension, and Relaxation from the external world provides the excitation that pushes from within to the outside, or vice versa.

The excited object expresses itself with the opposite counteraction.

Think of the peaks and valleys of a wave, and the "double pendulum oscillations, which manifest themselves as systole and diastole" (Professor O. Rosenbach). **Tension from outside is followed by relaxation from within.**

> *"The possibility of death from lack of water (death by thirst), or from large water losses (cholera, heat stroke, etc.), shows clearly enough that even a large, sudden release of loosely bound water quickly destroys the functioning. As long as the active protoplasm is subject to strong operational stimuli, it must activate and excrete water, just as it must generate or release heat; but only as long as the intensification of the stimuli, its maximum kinetic energy, just overcomes the tensions to which the supply of firmly bound material is subject. As soon as the displacements brought about by a stimulus exceed a certain limit set by the individual tension equilibrium, as soon as the maximum stimuli relax the last reserves of energy without triggering a regulation, i.e. if the opposing tensions are not brought into effect, in short,* ***if they cause displacements that are incompatible with maintaining the elaborate balance of the organization (the basis of the transformer's construction), the operation halts or ceases completely due to the destruction of the structure or the elimination of the ability to achieve functional tensions (the regular wave motion in all parts). This means that the possibility of maintaining the dynamic or elastic balance of the organization, which is characterized by the perfect, i.e., Double, Pendulum Oscillations, which manifest themselves externally as systole and diastole, is lost. We have already explained how dehydration affects healthy individuals."*** *- Dr Ottomar Rosenbach, MD, in "Heart Diseases and their Treatment", 1897.*

Rosenbach rightly sees **the wonderful, constantly changing yet unbreakable, mobile yet firm Connection of All Components of the Body as the Essence of Physical Life Processes.**

> ***"The Human Circulatory System Is Not Closed, but is connected through surface organs: Lungs, Skin, Nerves; with the finest currents and with the masses of the outside world. Through these portals and instruments, he releases the Currents, Energy Forms, and masses formed within; through them, he incorporates active Currents and Masses."*** *- Dr Ottomar Rosenbach, MD*

Every tension in the body corresponds to a relaxation of external forces, its intakes. This results in an expenditure on the outside. But then, income is also sought from the inside. Thus, a power play arises back and forth, releasing, separating, dividing, and contracting again.

The mysterious powers of light become clear to us precisely in such a bath.

If one lets the light fall into a glass filled with water, one sees how the light is lifted, pushing upwards. If we bathe in illuminated water, we have the same sensation: we feel supported, lifted up. When bathing in the dark, on the other hand, we have the feeling of sinking, of being pulled down.

These remarkable properties are clearly evident to everyone. If science takes them on board, it will lead to new discoveries and many practical applications.

Humanity Must First be Educated to Understand the Miraculous Effects of Light and Colour, while the matter is so simple, that everyone can conduct the most convincing experiments in their own environment.

A medical doctor writes to us:

> ***"I recently told a gentleman who had collapsed from overexertion that he could strengthen his nerves with Yellow Light. He only needed to put good Yellow Glasses in his windows, and Yellow Carpets, and Wallpaper in his study, but in the evening, because he suffered from insomnia, he should place a Blue lamp on his bedside table and surround his bed with Blue curtains. Yellow Strengthens, and Blue Calms.***
> ***He tried it, and was delighted with the effect within a few days."***

Professor Ponza, who ran a Mental Asylum in Alexandria, **brought a patient who believed he was buried alive and refused food, drink, and speech into a room saturated with Yellow Light. And lo and behold, that very same day the man allowed himself to eat, and within a few weeks he was Discharged as Cured. The blessing of the Powers of Light and Colour.**

Our field grays also appreciate the colours very well.

> *"The field gray is practical, but the colour itself is not beautiful", a soldier returning home from the fray told me. "And that's why", he continued,* ***"we love and seek the colours more than ever, and whoever decorates our homes with them is a benefactor to us."***

We were amazed at the richness of colour in the attached pictures of all kinds.

Do they have a purpose, a value? Oh, they have value! **They delighted the eye; they distracted the viewer's attention.** And what is a necessary need for the healthy applies to an even greater extent to the wounded and sick. **Hospitals and other accommodations should always be colourfully decorated.** I have observed many comrades expressing their joy again and again when they arrived at a colourful accommodation. How lively and good the mood was then! There is a direct longing for colour in most of them! Some can express it, others cannot.

One feels it clearly and generally, for another, different colours are inappropriate. I received this impression most strongly in the one belonging to an auxiliary hospital, established Christian Hospice in Leipzig on Seeburgstrasse, where with deep empathy for the souls of the wounded, skilful decorative work was carried out. So let us give our field-grey soldiers the opportunity to satisfy their love of colour, wherever possible.

Goethe Said So Beautifully:

> ***"In the Reflection of Colour We Have life!"***
>
> ***"In my century I am the only person who knows the truth in the difficult science of colours—of that, I say, I am not a little proud, and here I have a consciousness of a superiority to many."*** *- Goethe, in "Conversations with Goethe"*
> ***"Without Colour, There's No life!"*** *- Dr Walser, MD, a physician who loved light and colour, to whom humanity owes much gratitude for his work in this field.*

The power of colour still awaits its widespread acceptance.

> ***"When the power of Red light is absorbed by the body, it exerts a decomposing effect on the salts within it, forming ions, these finest structures that, as carriers of electrical energy, are of utmost importance for the operation of our life machine."*** *- Josef Wilk*

Through the distribution of these ions, various tasks now take place in the body. For example, when the Red light force encounters a citric acid in the body, it separates it into acid and iron. The latter is transferred to the bloodstream and thus made useful for our growth, the acid is excreted in the urine, etc. And so one can also pursue the even more extensive emolytic activity of Blue Light.

Dr Walser reports that he achieved great success with Blue light in a wide variety of illnesses.

For example:

In 22 cases of Skin Diseases, he cured 82% (18 cases).
In 51 cases of Nervous Exhaustion, he cured 80% (41 cases).
In 28 cases of Rheumatism, all were cured 100%.
Of 6 cases of Syphilis, he cured 67% (4 cases) with incandescent light, and Blue irradiation, 48 cases of Chronic Constipation were all cured 100%, with Blue irradiation, arc light, etc.

Colour Light Treatment was given priority, and Vibration Massage was also used, which stimulates the metabolism in turn, increased and thus facilitated access for the light forces. Every substance is built from Emissary Energy, and this is Transformed by the Light Forces into Other Forms of Energy.

Heat, Electricity, Light is Awakened from it. The aforementioned iron salt is bound emissary energy until other forces, in our case Light, Cause a Regrouping of its Particles, Giving Life to New Forms and Forces.

Light and Colours in the Service of the People's Welfare

New research is breaking ground in matters of Light and Colour.

And it is based on **Goethe's Theory of Colour, which the distinguished scholars had left unnoticed for far too long.**

Goethe, who was a far more thorough observer of nature than was assumed until recently, puts forward the claim in his theory of colour; that colours arise as a result of a turbidity or darkening of white light, or by exposing dark and murky light. By illuminating dark, blue, and ultraviolet arise.

Goethe sought unity in the flight of phenomena, overcoming matter with spirit, lightness with unity, darkness with light.

One light lives in all colours, one thought in all creation.

These teachings of Goethe were examined by experts.

The great physicist Dr Arnold Brass, whose significant discoveries about Light and Colour, long Ignored by Science, and suppressed by certain opponents in an unworthy manner, were further developed and enriched through his own research by the physicist Professor Karl Horn, has become a pillar for **Goethe's Truths About Light and Colour, which will now spread their blessings over the German People, and All of Humanity.**

Other courageous men are joining the aforementioned in their thorough, tireless work for Goethe's great, long-hidden Discoveries in the Field of Light.

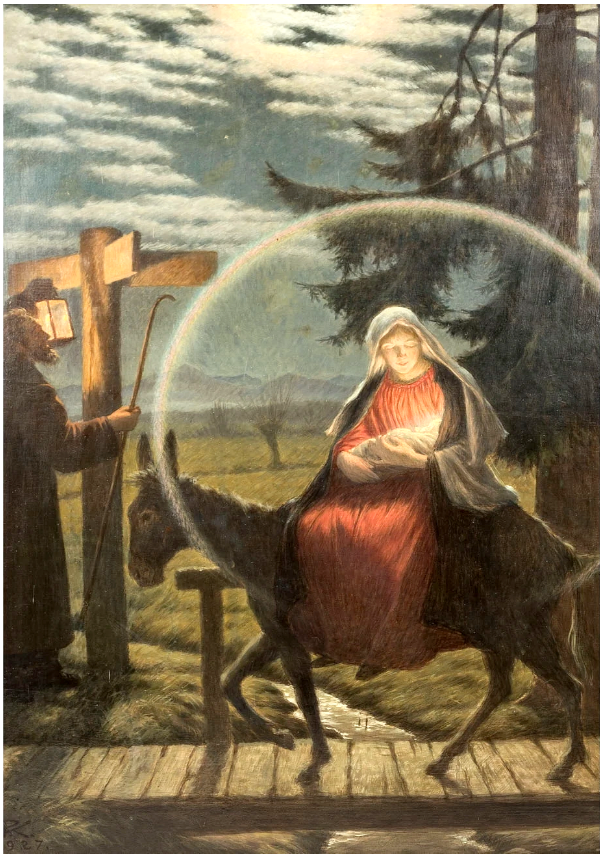
Such as Paul Kaemmerer, the learned painter, and highly deserving supporter of the Keim Society, to whom a monument has also been erected here for his self-sacrificing struggle for the Understanding of the Forces of Light, and who, along with Horn, was also able to have the joy of witnessing the victory of the good cause he represented. Our experts must learn to Understand that **Colours, Are Objective Physical Energies.** Our higher educational institutions Must Pursue Colour and Light Physics In This Sense. Newton knew nothing about diastole and systole of the eye, or about organ aggregates that function in diastole and systole — this is emphasized by Professor Karl Horn. Therefore, it is understandable why many doctors and physiologists have already turned away from Newton's teachings and turned to Goethe's. For them, it will still be primarily a matter of learning about the diastole-systole physics of Goethe and Rosenbach (the great energeticist), as the basis of diastole and systole physiology and of using the theory of physical transformation aggregates as the basis for the theory of physiological transformation aggregates.

The healing effects of coloured light can only be researched and applied on the basis of Goethe's Theory of Colours.

So says Karl Horn, and we may agree:

> ***"Can we, not assume that the coloured natural effects, just as the magnetic, electrical, and other effects, are based on a reciprocal relationship, a polarity, or whatever one might call the phenomena of the dual, even multiple, in a decisive unity?"*** - *Karl Horn*

Goethe teaches us that: Colours Arise from the Dynamic Interaction of Light and Darkness (Positive and Negative Forces), and physical material (turbidity, light resistance). When light energy acts on a light resistance, both the light energy, and the material are transformed. In the theory of light, both positive and negative exist. Minus-bore processes, Positive and Negative Forces, as In All Other Physical Phenomena, such as Electricity, Magnetism, Heat, Movement, Etc. Light and The Theory of Colours Has a Close Relationship to All Other Parts of Natural Science; these Must Therefore be Connected and Developed. Light and Darkness, Acting Polar-Dynamically on the body, evoke Colour contrasts, and allow us to recognize the General Natural Law of Duality, Which Applies Everywhere In Creation, and Has Yet To Be Revealed to the Great Mass of Humanity.



Paul Kaemmerer, "Heilige Familie auf der Flucht", 1927

Colours Have Objective and Subjective Effects

The organic, polar-dynamic activity of the membrane of our eyes, and its relationship to the polar-dynamic external world; finds its proper appreciation in Goethe. Newton's purely monistic-atomistic doctrine fostered a world-view, that has harmed us.

Goethe approaches Primal Phenomena, uncovers with his research the most Mysterious Forces in the Cosmic Workings, and lays the Foundation for a Philosophy of Life that is particularly suited to us Germans. **Therefore, the fight for Goethe's Theory of Light and Colour is a Fight for the German cause, for German light (For the Progress of Humanity, and its awareness of the Forces of Creation). Through Goethe, we see that the effectiveness of light energy is counteracted by a dynamic, reactive energy that establishes equilibrium between forces. The centrifugal effect of light is counteracted by a centripetal force as a counterforce; darkness responds to light.** The conservation of energy cannot be truly justified by effect and rest. If we substitute reverse work for rest, we will understand the matter better. We erred by taking, with Newton, a crude experience as a mathematical phenomenon; **Goethe places the colour phenomena on the correct, dynamic, foundation. We must begin here in order to gain clarity about many things and to be able to properly grasp the world view.**

Light is more than monistic wisdom gives it:

Light, the Source of Colours Is: Force, Matter and Space.

Our science, which has become material, will have to embrace new insights, and can no longer avoid Goethe's doctrine of the counterplay between the forces of light and darkness in the physical world. Our schools currently teach nothing about this counterplay, the law of polarity. **And from this knowledge, a new philosophy of light and darkness, a new healing art, and much more will grow.** Goethe showed us the diastole and systole of the eye, and this ebb and flow of life's workings applies to the entire body, down to its smallest parts.

The theory of the healing and strengthening effects of colours only finds its proper foundation through delving into the works of Goethe, Rosenbach, Brass, and other honest researchers. Brass builds on Goethe's conception of the origin of colours from the interaction of light and darkness against resistance.

He says that where energy is directed over a Low-Energy area, Blue-Violet or "chemically acting force", is produced under all circumstances; where a low-energy zone is forced into a high-energy one, yellow-red colours appear to our eyes and mind (objective experiments revealed warmth).

Clothes and fabrics, wallpaper, and carpets can also heal and strengthen through their colour effects, and we will gain an understanding of this by examining the studies of the researchers mentioned in our writing. The Therapy and Hygiene of the future, the new spa and recreation facilities now emerging

will take these facts into account, must master Light and Colours to the same extent as the knowledge of the Therapeutic-Hygienic values of These Forces Arise.

Light and Colours Are Physical And Energetic Phenomena; therefore they can be combined into a final unity, capable of unification at one point.

> ***"We can derive all phenomena from a primal force that works to eliminate existing differences, to unite all beings into a homogeneous mass at a mathematical point."*** *- Dr Julius Robert von Mayer, MD, known for the* ***discovery of the law of conservation of energy; while a ship's doctor, observed the colour of European sailors blood, and developed a theory that Heat and "Motion" were related, eventually leading to the concept that energy cannot be created or destroyed but can only be transformed from one form to another.***

Materials testing for the theory of light forces must be directly re-established.

We need a lighting technology that, analogous to the already fully developed field of electrical engineering, enables the rational exploitation, measurement, and transformation of light forces, just as we exploit and control other natural forces today.

> ***"Physics must begin with the theory of light, since light and the eye are the best organs for human cognition."***

We need light institutes to research light.

The powers of light are particularly evident at high altitudes.

The experiences of Dr Backer, Rikli, and others teach us this.

What good could the sun alone do on Bavaria's mountains if it were made available to the hundreds of thousands of needy as a remedy and tonic by skilled hands?

We have plenty of Lupus and other Tuberculous diseases in our country as well, and have therefore established our own committee to combat these evils.

May he direct his gaze to where rapid, safe healing is guaranteed for our legions: to the solar powers of the Bavarian highlands.

Let us create Light Healing Centers in these regions!

We need serious peace work, revitalization in hygiene and also in the economic sphere.

Our Light and Colour Healing Centers will then attract the desired stream of tourists from all sides, thus also bringing economic blessings.

Become Light Doctors! I call to those who are called.

Unimagined joys blossom for the Helio-Therapist, as I saw first hand among the greats in this field, and as the recent successes of Dr M. Backer, who owns a solar home in the Allgäu, confirmed to me. Some cases presented to the wider public in "Over Land and Sea" must have aroused everyone's delight.

These are, after all, true rebirths through the mysterious weaving of the sun's power. We saw a 12 year-old girl with Spinal Tuberculosis, resulting in a hunchback and complete paralysis of both legs.

Next to her, we saw the same girl after an 18 month **Sun Cure.**

The Tuberculosis was Cured, the hunchback disappeared, and the paralysis of her legs was eliminated.

We saw a 4 1/2 year-old boy with 34 tubercle lesions in his joints and bones, with festering tuberculous glands, and with peritoneal and pulmonary tuberculosis.

Later, we saw the same child, Cured by a Sun Cure, working in the garden!

The sun, as a physician, works wonders upon wonders!

And let colours also come into effect alongside the light; be light and colour healers.

Prof. K. Horn coined the beautiful phrase: "Bayreuth of Light", which may rise again on Hohenpeißenberg in the Alpine foreland.

The sources of light and the beauty of colour, for the salvation of rich and poor alike! **Where nature grants, drawing from its abundant source, where art must be invoked, also from the power of artificial light sources – which, in the right hands, achieve far more than the masses imagine - pouring blessings.**

> ***"All Life Is Light, all light comes from the sun.***
> ***All life comes from the sun.***
> ***When will our doctors and governments finally grasp this fountain of youth on the German Alpine heights."*** *- Karl I. Luther*

Whoever serves the light, serves God himself, works in the plan of the highest creation. Millions of people draw abundant blessings from the sunlight mostly unconsciously. Only a small handful understands how to enjoy the sun's blessings and utilize them for the highest physical well-being.

The vast majority, however, pass it by carelessly, disdaining its sources of strength and healing, since they are ignorant of them. And yet there are noble and experienced men who teach us what the sun does for our health and what it can offer us in the art of healing. And there have been such men at all times, and they have found their followers. But no age has been as ripe for such knowledge as ours, with its culture that oppresses so many, that confines millions of people to closed spaces, removes them from nature, and alienates them from their natural lives. We spend too much time in our clothes; we have become woolen, but wool is stolen skin. **We should exercise our own, restore honour to the external life of our body and thereby relieve its inner life. We should cast floods of light over our bodies, making their powers available to the entire bodily workshop, awakening new life, resurrecting fresh instinctual forces.**

In this spirit; The Munich Society for Light Research, and this document is intended to serve this purpose, offering the researchers who distinguished themselves in the fight for our good cause, the due tribute of gratitude and may

be an incentive for all who feel called to work in the field of light research, to participate and to bring the blessings of light to humanity in broader waves than before.

We demand that **our society's plans be supported by the biological proof of the forces of light and colour with the help of neural analysis.**

This will provide material that will allow physicians and researchers to continue their fruitful work in the field covered in our paper.

A physiological, neural-analytical investigation of the effects of coloured light will bring us much that is new, foundational for the wisdom of the ancients and powerful tools for the colour light therapists now emerging.

We must investigate the influence of colours and light on the body with closed and open eyes. In this way, we determine their physical and psychological values.

The irradiations should be carried out with the body completely or partially exposed.

And the resulting pulse changes and other phenomena of physical life, which can be determined with the finest instruments, are to be precisely recorded by our doctors.

In doing so, we will quickly be able to discover the Powerful Expressions of the Individual Colours; the Invigorating Principle of Red and Yellow, the Peculiar Expressions of the Deep-Penetrating Ultraviolet, etc.

Through Neural Analysis, we have brought the testing of the finest medicinal substances onto a completely new basis and, for example, demonstrated that the scent of concentrated Poisons has a Paralyzing Effect Upon Inhalation, while the scent of diluted substances, however, has a stimulating effect that increases with potentization, varying to a certain degree but depending on the individual subjected to the experiment.

In this way, **the differences between subtle and coarse Light and Colour Forces can also be determined**, which, for contemporary **Hygiene and Therapy, means nothing other than the discovery of highly desirable new territory.**

It is impossible to express in brief **the delicacy and purity of the vital expressions of the Colours born of Light** that are expressed in such biological tests. In this process, quantities of matter and expressions of life are discovered that are inaccessible to any scientific proof other than Neural Analysis!

The Most Mysterious Dynamics of the Primal Forces of Creation Come Into Their Own in these investigations.

We Can Rejoice In This: For the Sake of the Blessing that Arises From It; For Suffering Humanity In Need of Strengthening.

Nature and Spirit Cannot Be Constrained by 680 Colour Norms.

Life and Humanity Cannot Be Understood and Conceptually represented by 680 numbers: Colour reveals the life of Humanity and Nature.” - Prof. Ewald Paul, Director of the Munich Society for Light Research, in “Light and Colours in the Service of the People's Welfare”, Therapeutic-Hygienic Studies, and Experiences with the Collaboration of Qualified Physicians and Experts, 1921.

Public Education About Light Therapy

“I have the following to say as the Head Physician of the first Medical Light Therapy Clinic, the “Red Cross”, Berlin: Years ago, the concept of **Light As A Healing Agent** was still unknown in the widest medical trade circles throughout the world.

After I compiled the scientific research on this topic, in my archives for light therapy based on extensive patient data, light was introduced as a healing agent in many newly established Light Therapy Clinics, naturally to the great chagrin of many General Medical Trade Practitioners, and Professors who had initially been alienated, and hostile towards the subject.

As Editor of the “Archives for Light Therapy”, this was done with regard to the great cause, which involves nothing less than the integration of a new natural force, previously unused for healing purposes, into the plan of healing: Light!

I did so in the conviction that Light, Like Truth, would ultimately always prevail, for Light must remain Light, despite all the business envy of the adversaries within the college's own camp.

As is well known, there is no worse envy than that among Medical Trade Doctors.

If popular enlightenment for a good cause encounters such resistance from those who should actually be the appointed representatives of the cause of light and truth, the latter should not be surprised when attempts are made by others to take over public enlightenment.

The healthy sentiment of the people simply cannot be rolled back 100 years as easily as the representatives of science succeeded in doing in the Priessnitz case (with the Water Cure).

Now, with the Light of the world, a new healing power is being demonstrated. The same thing could happen with Light, as with Water.

Through official silence and denial, if the healthy instinct of the people did not also have a say.

The old contradiction between Medical Guild constraints, which seek to forbid doctors from advocating for innovations, and popular enlightenment, which demands the best as just good enough for itself — this old contradiction will persist as long as our bureaucracy, which dominates all circumstances, assesses everything from a legal standpoint, treats every innovation according to its still.

We are faced with a huge gaping gap in popular enlightenment with every new discovery and invention: **enlightenment from qualified sources is opposed by the monopolization drive of the old school**; enlightenment from unqualified sources is opposed by a sense of decency that would even protect backward authorities out of piety against the new attackers.

A New Community, from qualified sources, would have to step in to Educate the People.

The steps to this end have been initiated.

The Archive for Light Therapy has been in existence as a collection point for a year and a half, and the journalism of the new Association for Public Enlightenment is diligently at work. Be presented as truthful based on the facts, since it corresponds to the patient journal of our 4,000 patients at the "Botes Kreuz" Light Therapy Clinic, which the management has access to.

"For the benefit of no one, to the harm of no one", that is his standpoint on the steep, difficult path he must tread as a pioneer for the cause of light, responsible solely to his conscience (indeed, even without the prospect of thanks and recognition from his petty contemporaries), as long as the gap yawns between the envy of colleagues and uninvited public enlightenment remains.

He alone is then the one called!

Now that the Light Healing Method has spread throughout Europe, he can no longer ask a few disaffected Central Europeans, **who would like to monopolize everything, for their permission to allow him to bring light to the world as a Healing Agent.**

Above all, he must not care about those who have fled under the protective wing **of the certain Journals, and their "opinions", from there intimidating the world with their "Monopolization Plans."**

This is his position between Guild Constraints and public enlightenment.

Anyone who brings something new must make some sacrifices for this cause, for without sacrifice, there is no victory for the truly called." - Dr E. Below, MD, Chief Physician of the Red Cross Light Therapy Institute, in "Archives for Light Therapy", March 1901.

Coloured Jewellery in its Hygienic-Therapeutic Action

"It is certain that Blue Glass interchanged with Red does good service at this day in Therapy.

The sunlight radiating through it, on the tumour causes a loosening effect under the Red glass, chemically dispersing under the Blue.

The ruby was credited with a good reaction on women's abdominal maladies.

In these days we see a similar effect from ruby glass rays.

To chrysolite was ascribed influence on secret nervous processes.

The scrofulous and those suffering from blood decomposition dared not wear blue jewellery, but copper buckles and such like were recommended, which were also said to be good for varix.

Many of On the "Utility" Phase of the Minor these assertions were verified by practitioners at a session of our Association for Light and Colour Investigation.

For the scrofulous and similar anaemic or prostrating conditions gems that excite, those having lively colours, are best.

The Effect on Epileptics of Dark Violet, and Purple Is Remarkable.

Many of them recover visibly by viewing such stones.

One of them affirmed the falling off of the attacks with looking at these colours, especially the Dark Violet, and I have, even in a medical Periodical and other Experts Papers, **Read Accounts of It.**

We should, therefore, make special Epileptic Rings and other Jewellery Articles. Red Stones with delicate blue outer edging attract attention to them, having diverting effect.

Our expert Director Koch, who, years ago, collaborated with **the noted French physician Professor Tissier, relates that the latter used a Kaleidoscope as the simplest cure (that never failed) for Nervous children suffering from Insomnia.**

The children had to look at the play of colour and form which diverted and soothed them.

Now, could not similar jewellery objects work in the same manner? Certainly!

Yellow has dissolving, separating action-the ancients say.

Yellow pearl jewels and belts should be applied to persons of languid disposition.

We know in these days, from the experiments of our physicians, liver and bowels and stomach are shaken up by radiations through Yellow glass, and often in surprisingly quick manner.

The ancients did not overshoot the mark much in this matter.

Radiating, diverting action was ascribed to Gold.

In fact, Gold Earrings also have often acted healthfully and usefully.

Gold coins, and chains worn on the breast assist in Asthma.

Several of our physicians acknowledge this.

We see that Ancient Wisdom and Modern Science Agreed.

One of our experts, the Colour Investigator, Michaelis, has given 20 years special study on Coloured Jewellery in its Hygienic-Therapeutic Action.

He can tell many interesting things about the colours.

Certainly this realm of research is not uninteresting, and we are ready to lend a hand for further carrying it along with our collected material." - Prof. Ewald Paul, in "Colour Mystics, and Jewellery", Pforzheimer Bijouterie - Zeitung, 1922.

Physical Effects & Biological Action of Light Energy Upon The Skin, Circulation, Nervous System & Metabolism

"The Physical Action of Light Energy:

When light of ordinary visible wave length strikes a molecule which is a very minute obstacle, the wave length is long by comparison with the molecule and goes smoothly on with but little absorption, or else, is smoothly reflected with but little absorption; but **when Ultra-Violet Light is used, the wave length is sufficiently short to make the molecule, or molecule groups, interfere with, and break up the waves, more or less.**

This breaking up of waves, involves imparting energy to the molecules and possibly the disruption of molecules with that energy.

The higher the frequency of the oscillating light corpuscles, the more likely this is to occur.

Groups of molecules are much more likely to be affected than individual molecules, just as a disruptive action would be more marked from the impingement of waves of suitable length upon a group of persons than upon a single individual, that is, in the jostling and general shaking up to which they would be subjected.

The individual might be passed by as the individual molecule by the longer wave lengths.

It is possible that there may be some particular sympathetic resonance between atoms and light frequencies, as, for example, **between Oxygen Atoms and Ultra-Violet Light Frequencies.**

The following theories and facts are generally accepted throughout the scientific world today, and help to elucidate the problem of the action of vibratory energy.

All matter, whether organic or inorganic, is in a state of continual motion as regards its molecular or atomic structure.

William Bean in "A theory as to the Roentgen Ray Action upon Malignant Neoplasms", The Journal of Advanced Therapeutics, May 1902, regards as proof that **one form, at least, of molecular vibration is induced by an ethereal vibration.** The physician's conception of Light, should not be from the point of optics and concern the visual frequencies only, i.e., from and including the Red, to and including the Violet, but must embrace the invisible part of the spectrum also.

That mysterious region known as the Ultra-Violet is of equal interest to the Physicist and Physician, as is also the invisible region below the Red.

The visible contains much heat, the energy called light, is after all very small.

It is an established scientific fact that, **many chemical actions will not take place until a certain temperature is reached, which means the attainment of a certain molecular vibration period.**

Others again may be brought about by exposure to light, which may or may not change the temperature, but which manifestly must have influenced the molecular vibrations.

This action is shown to vary with the different parts of the spectrum.

Photobiology has established, for example, a Bactericidal action for the middle third of the Ultra-Violet region, the ability to excite tissue reaction also to the Ultra-Violet, but the exact locality not determined; **a quieting action upon the Nervous System to the Blue frequencies, and apparently an increase of muscular power under their influence.**

There is also apparently **an Exciting or Stimulating Action Upon the Nervous System from the frequencies of the Red region.**

These varying effects are due to the varying wave lengths or the varying frequencies of vibration. From the action of a complex of all of the frequencies, there is an influence upon molecular activity.

In considering the phenomena of the vibrations of sound, and the laws governing it, it is well known that to produce a musical note, it is necessary either to strike the body capable of giving it out, or to have it placed where it may receive the influence of another vibrating body.

For this latter effect, however, the vibrating body, must be of the same pitch or an even multiple of it, and the vigour of the response depends for one factor upon the approach of that multiple to unity. **William H. Bean, advanced the theory that, a restorative change might be established in a pathologic cell-like cancer cell, for example, by which instead of being destroyed, its character may become so altered that it becomes again a normal cell.**

Such a change he attributed to the action of the Roentgen Ray.

A single X Ray impulse is in every respect an ultraviolet light frequency, but there the similarity ends, for the oscillating corpuscles of Ultra-Violet light are rhythmic and continuous, while the X Ray is a discontinuous, infrequent and solitary pulse.

The proper atomic motion of a cell, for example, should be stimulated by being in synchronism with an ethereal vibration, whose period of vibration is the same or a multiple of it. In this way, not only groups of molecules but single molecules should be affected.

In the longer and slower frequencies, as represented by visible light, are unquestionably to be found the periods of vibrational activity necessary to the maintenance of the living organism in a condition of normal health and function, but when it comes to be a question of diseased processes, a tubercular gland, a lupus patch, an organized exudate, associated with beginning degenerative changes, a sepsis, a syphilitic lesion, it seems necessary, judging from a knowledge of physical laws and physiologic action, as well as clinical results, to have the periods of vibrational activity not only that of groups of molecules, but also in sympathetic resonance with the periods of individual molecules or atoms.

The author believes that, the action of condensed light, of which Ultra-Violet frequencies are active constituents, in diseases characterized by deficient oxidation, the sub-catabolic Diseases of Wakefield, is to be accounted for on physical grounds by the fact that **there is a Sympathetic Resonance between the Vibrational activity of the Oxygen of the Blood and the periods of Ultra-Violet frequencies.**

It has been established by Cornu, that the Ultra-Violet frequencies from the Sun are absorbed not by the varying constituents of the atmosphere, such as the watery vapour, but essentially by the Oxygen and the nitrogen of the air.

The swing of the oscillating corpuscles of the penetrant chemical frequencies have either the same periodicity or rate of vibrational activity as an oxygen atom, or are a near multiple of the normal atomic action.

In other words they are in Sympathetic Resonance.

It does not seem to admit of question but that the essential principle of chemical action and vital activity, viz., Motion, Molecular or Atomic, is One and the Same Thing.

The molecules of a body, either inorganic, organic or protoplasmic, have a motion dependent upon ethereal vibration, and that the Atomic constituents of the molecules of these substances or bodies have a rate of vibrational activity or motion peculiar to the molecule to which they belong, then it follows that this rate of vibrational activity or atomic motion must be influenced by the right kind of vibrational activity of the Ether.

The range of this vibrational activity must be compatible with the integrity of the molecule itself.

The breaking up of the higher frequency of the oscillating light corpuscles, as they encounter the swing of the oscillating atoms or molecules, results in an impartation of energy to the molecule, or there may be a disruption of the molecule as the result of that impartation of energy.

Light Waves represent definite periods of vibrational activity.

They sustain every activity on earth, and alone keep up life.

The analgesia, which is produced by the concentrated, visible chemical frequencies of light, may be induced by a continuous, harmonious vibration, which, judging from effect, has served to tetanize as it were, and exhaust the motility of peripheral nerve elements.

From the physical properties of light energy, and its physical action upon a body endowed with a vito-chemical constitution, as is the living organism, follow chemical, osmotic, and molecular changes or physiological action.

So far as the chemical end of the spectrum is concerned, this physical action seems a rational one.

But for that matter all the visible frequencies are chemical as well as the invisible beyond the violet, and the same is true at the other end of the spectrum.

It is only that certain frequencies, i.e., from the Blue and above, are more intensely active in this way in relation to the living organism, at least so far as known. In normal conditions of the living organism, the higher chemical frequencies as used therapeutically in concentrated light energy, are not essential, but only active as they exist in diffused sunlight.

When physical conditions, as they relate to light and atmosphere, render them intensely active, and when the conditions of the living organism render it especially vulnerable, i.e., in conditions of more or less depressed vitality, untoward results follow.

There is some evidence also that **in prolonged unbroken periods of sunshine, with atmospheric conditions favourable to more than normal diffusion of the chemical frequencies, i.e., less active absorption before reaching the earth's surface, that nerve and mental states, where predisposition exists, are profoundly and unfavourably influenced. In an experience extending over 10 years among the insane, it was a matter of common observation, that an untoward influence was exerted over the mental state of patients under these physical conditions. In addition the greater prevalence of both suicide and homicide, has been noted by the author over a period of 30 years, as well as by others, during the prevalence of such physical conditions.**

Light Energy causes contraction of protoplasm, and acts directly upon the blood, increasing thereby its oxygenating power.

The periodicity of the vibrational activity of the higher light frequencies and their periodical relation to the vibrational activity of Oxygen atoms, and also the fluorescence of the blood and of the lymph serum, furnish abundant supporting and corroborative evidence of the physical and physiological action of light energy.

This is further substantiated by the intimate relation existing between the normal organism and light energy, as well as by a very considerable experimental work and clinical data.

The waves of Red Light measured by the amount of energy they carry, are immensely more powerful than the waves of Blue.

Under proper conditions the Green, Red and Infra-Red frequencies will all produce photographic action.

A proof of the chemical action of the Red frequencies can be had in the ability to photograph through the human body.

The Influence of Coloured Light upon the Nervous System

It has long been a matter of common observation that Different Colours Produce Definite Effects Upon the Senses and Feelings.

And it is also evident from many biological facts that Light Has A Powerful Influence Upon the Nervous System and the Organs of Sense.

Red is always spoken of as a warm colour; Blue as a cold colour; Yellow as a cheerful colour; Green as a restful colour.

This indicates a Reflex Effect Upon the Nerves.

The effect of Light Energy is not only seen in the action upon the Nervous Organs, but upon the Mental State as well.

There are also many phenomena and modifications of vital functions which arise from its indirect action.

In the "Undecaying radiance of the Sun man takes great delight."

There is no natural phenomenon which produces so profound an effect upon the mind of man and his consciousness as light.

"The royal Sun feedeth all", but it is not only physical food, but mental as well. Under the transition from darkness to light the stimulation of the mental power is greater than from any other form of energy.

The withdrawal of this stimulus or reversion to darkness has the opposite effect.

The experiments of Finsen show that **Ultra-Violet rays act as a vigorous irritant to the Nerve System and that by them skin reflexes are increased.**

Schmidt, Rampler, and Ponct, are quoted as authorities for the statement that **Psychical Disturbances even to actual Delirium, have been observed in the Eye Hospitals, where patients have been forced to live for a long time in the dark.**

Cases of different Psychoses, following Operations upon the Eyes, are recorded by Frankt-Ffochwart, Landersberg and Elschning.

Numerous experiments were made by the physiologist de Parville with the different parts of the spectrum.

These experiments, referred to constantly in the literature of photobiology, convincingly show that the **Red Frequencies act as excitants to the Nerves.**

The recent experiments of Pansini point in the same direction.

De Parville's experiments demonstrated **a calming effect from the other end of the spectrum, attributed to the Green, Blue and Violet Frequencies.**

Another physiologist has produced sensations of faintness by exposure to Red light, and afterward the symptoms have been removed by exposure to the conjoined Red, and Green frequencies.

In a large photographic plate manufactory, it was noted that **a change of colour in the light of the workroom from Red to Green acted to materially modify the excitability of the workmen.**

They were singularly lively over their work, singing, arguing loudly and gesticulating vehemently. They became much quieter after the change.

Goethe in his “Farbenlehre”, or in his “Theory of Colours” **called attention to the connection between colours and certain emotions.**

He observed that Red and Yellow light energy exercised a bracing effect, while Green and Blue were depressing.

The observations of Baron Reichenbach were to the same effect.

Akopenko, who worked in the laboratory of Bechtrew, proved that the duration of psychical processes is unquestionably affected by the energy of the different parts of the spectrum.

A more invigorating and stimulating effect is noted from the effects of the colours nearest to the heat rays.

The mood of the person under observation is affected; in Red light he feels brisk and cheerful, inclined to move and act.

In my own hospital wards, I have always considered the Sun porch as the Most Important of All the Means of Cure.

Every tubercular joint confined to bed, either with horizontal extension or with fixation or traction of joint, **spends the entire day at all seasons lying directly in the Sunshine, his eyes and head being protected by a Green Shade attached to the head of the bed.**

The effect on health, appetite and cell resistance is simply marvellous.

When able to walk about, patients are **encouraged to play in the Sunshine**, not in the shade. I have not infrequently sent out into the **sunlight, and fresh air** apparently hopeless cases of joint disease with lardaceous organs, and **have had them return with sinuses healed, waxy changes arrested and health restored.**

Of course, it is necessary that surrounding conditions, even in the country, shall be healthful, since many farmhouses are unsanitary in the extreme.

In the Treatment of Tuberculosis of the joints not only are mechanical and operative measures necessary, but all the accessory conditions of health are essential: a superabundance of easily digested and nutritious food, and clothing adapted to the surrounding conditions, in addition to the sunshine and air.

There are few individuals who have not observed the influence of darkness and poverty and vice on the general health, and yet **few physicians realize the importance of securing the brighter and better conditions.**

The time is near at hand when Sanatoria for the treatment of tuberculosis of the hard parts, as well as those of the soft tissues, will be established.

Outdoor life in tents, either in the pine forests or in the hospital grounds, promises a simple practical application of the principles enumerated.

Cheeks will grow more rosy, flesh will increase, energy will improve, and resistive power will speedily be such as to control and overcome the tubercle-bacilli.

McKenzie and Galloway have also adopted this most excellent principle of treating cases of tuberculosis of joints in the open air by having them live in tents, thus giving patients all **the advantages of sunshine and fresh air that are now in vogue in the Lung Tuberculosis Sanatoria.**

The appetite is greatly improved under such conditions; more food is taken, and it is better digested.

If waves of light strike a growing plant they do work; and to this end are absorbed all above the Green.

The Red medium of the blood, with its magnitude of function, upon which life depends, cannot, according to physical laws, be an exception to the law of light absorption; a law which has been abundantly proven by experimental work and clinical observation.

The absorption of light energy by the living organism is one of great import, and by it the writer believes is to be found the key to read the letters of life.

An exhibition of electric arc light energy has not only yielded good results at the author's hands in tuberculosis of the lungs but in all diseased condition of the respiratory mucous membrane which have offered themselves for treatment.

Among these Conditions may be mentioned:

1. **Chronic Bronchitis.**
2. **Bronchial Asthma.**
3. **Convalescence from la grippe.**
4. **Broncho-pneumonia (characterized by constant harassing cough and profound exhaustion).**
5. **Hay Asthma.**
6. **Acute Catarrhal Colds.**

In the Treatment of All Diseases of the Respiratory System, as well as in catarrhal conditions of the nasal passages, there have been secured certain definite and invariable results: viz., Improved Respiration, fuller and slower, with gradually increasing respiratory capacity; Diminished Irritability of the mucous membranes, and Lessened Discharge. Improvement from the harassing cough has invariably been noted from the first exposure.

In acute catarrhal colds with sneezing and coryza, exposure to the light energy of the arc uniformly results in complete control at the time of these manifestations. If the condition be taken sufficiently early its further progress is arrested. **Moeller showed that in radiant energy baths, the heat rays readily penetrate even bones.**

The penetrating light rays below the Blue, i.e., the Red, Yellow and Green, considered in relation to molecular activity would seem, by reason of their length frequency and amplitude of oscillation, incapable of exciting chemical action.

They doubtless undergo transformation into heat in the deeper structures.

This action may readily influence excessive perspiration and excessive drainage of the deeper tissues. It is in turn followed by marked sedation, which can readily be accounted for by the sudden and intense drainage through the skin of the accumulated products of the disturbed chemico-vital action of the system.

The Action of Incandescent Light Energy in Health

The action of these Baths was studied by E. Rosen upon healthy men.

Following a series of 12 of these **Radiant Heat Baths, a marked Improvement of Appetite, and Sleep was noted.**

There was also a gain in weight.

These favourable changes seemed to be lasting.

There was now a numerical increase, now a diminution of the cells according to Rosen.

Therapeutic Indications for an Expenditure of Incandescent Light Energy

Incandescent Light Baths Have Been Found Useful In:

1. Lowered Nutrition; The acid dyscrasias, rachitis, osteomalacea,
2. Lipogenous (also called adipogenous; adipos fat) Dyscrasias; Obesity, biliary lithiasis, gravel, diabetes, arthritic manifestations of gout and rheumatism,
3. Alterations of the Blood State; Anaemia, chlorosis, lymphostasis, syphilis,
4. Nervous Conditions; tabes, neuralgias, hysteria, psychoses,
5. Respiratory & Circulatory Conditions; Bronchitis, bronchial asthma, cardiac hypertrophy,
6. Diseases of the kidneys; Nephritis,
7. Surgical Conditions; Chronic Tubercular Ulcers, inflammatory diseases of bones, chronic leg ulcers, paralysis and trophic disorders,
8. Toxaemias; Alcohol, drug and metallic poisoning;
9. As a Hygienic Measure.

In some of these conditions, they form the remedy par excellence, in others an exhibition of a light energy more profoundly chemical in its action, is indicated, i.e., Solar Light or Electric Arc Light Energy.

The Therapeutic Effects of Incandescent Light Energy

There is established by the action of these Baths a profound action on the Vaso-dilators of the arteries. By the stimulation imparted to them the blood is permitted to flow more rapidly to the surface. In this way the heart is relieved of its burden, and, at the same time, the constriction to the arterial circulation and the capillaries is also lessened. From this action there ensues lowered tension of the blood stream with an increase in its volume and uniformity. A marked effect upon sensory centres is noted, as is evidenced by a diminution of nerve irritation and debility." - in "Light Energy, its Physics, Physiological Action, and Therapeutic Applications", 1904.

How to choose the Colour, or Colours required for the Treatment of a particular Condition

"Considering the fact that a cell is composed of molecules, molecules are made up of atoms which in turn contain electrons, protons, etc., we come down to the original substance which in its final analysis ceases to be material but should be rather considered as a "state of energy," and since all bodies are made up of such Electro-Magnetic Cells, the human organism must be also an Electro-Magnetic Dynamo. Observing the electro-magnetic currents of cellular elements we find that as soon as they become disturbed a change of polarity takes place and the chemistry of the blood and colloids assumes a new quality. When such depolarized cells are subjected to a microscopic examination they reveal that this disturbance of polarity causes not only a change of bio-chemical qualities in the constituent elements, but that it alters the size and position of the cell's nucleus and transforms completely even the cell itself, developing cellular structures of a foreign type and entirely different "tensile strength," in the sense that such new tissues, when subjected to the stimuli of light and colour, respond quite differently than the normal tissues of a healthy body, their resistance being either lowered or increased. **Health or wholeness of a body is essentially a biological condition, manifesting objectively as the vital potency or "tune" of a being.**

After a period of more than 20 years of research and experimenting with light and colour upon living organisms, I have discovered a fact of extreme importance, namely that the properties of the various rays must be divided into 2 potencies:

1. **Biological.**
2. **Pathological.**

In other words, that it is impossible to use freely a whole range of any colour, for biological or curative purposes, without controlling the proportion of its intensity and quantity. Each colour contains within its scale not only the healing and life-giving quality, but also a death-dealing potency.

I found that the properties contained within differ in quality and potency at various points, giving either a biological, that is, life-promoting reaction, or a pathological and lethal one. Extending those tests to the whole spectrum from Ultra-Violet, to the Infra-Red end, I discovered that every portion contains those two potencies at various intervals, but that those intervals do not alternate in a sequence but register at various points of the scale.

Further analyses have proved that this variation is due to the change of refraction.

Ultimate results have proved that; each colour has a specific function to perform in the development of normal life, and that, this life-promoting, or biological potency, is contained within a particular range of intensity correlated to certain elements contained within the protoplasm, and which under the stimuli of that colour become actively potent.

A rightly timed exposure will produce a slight rise of temperature sufficient to increase the molecular tension without altering the structural integrity of the cells, promoting metabolic activities and physiological functions.

An overdose of such an exposure will on the contrary raise the temperature of the protoplasmic substance beyond its normal state, disturbing thereby, or even destroying, cellular structures and manifesting objectively as a feeling of depletion, enervation, irritation, etc.

The reactions to light are not always the same, some colours produce sedative or even depressing effects, due to a process of inhibition; for example, radiations located between 4,000 to about 5,000 A.U. when rightly used have a highly stimulating influence on micro-organisms, promoting cellular multiplication and speeding up chemical reactions: if, however, the exposure is too extreme, protoplasmic activities become suddenly suspended, cells begin to shrink, contract and gradually a complete inhibition of functions takes place, followed by an encystment or even death.

All cellular activities run in cycles, and it is due to this fact that the reactions which take place within the human body during a treatment with light are so rapid and potent. Rhythm is the basic expression of all physiological functions, and just as the whole organism performs certain rhythmic actions such as the contraction and expansion of the heart or the inhalation and exhalation of air, so also each individual cell goes through various cyclic motions recurring rhythmically at various intervals.

Time is therefore an Important Factor in Colour-Therapy; because it is the cumulative effect of impulses that produces results and unless the exposure is rightly timed, even the use of a correctly chosen colour may become injurious if it brings the molecular tension to its pitch.

It must be always remembered that it is not the quantity of a stimulus which counts but its quality, and the cumulative effect of repeated impulses.

Since the human body is essentially a community of cells, a cumulative potency of rightly chosen and repeated irradiations will produce much more effective and more lasting results than a short exposure to an intense illumination.

Intensity relates chiefly to heat and distance, that is, a strong illumination will cover a larger area and produce more warmth, there will be more light in quantity of radiations but not in their quality, therefore the source of light should be always chosen and adjusted relatively to the effects which we wish to produce.

In general Colour Treatment should last from 20 to 30 minutes, considering the fact that since protoplasmic reactions run in cycles, an exposure of 30 minutes will produce a sufficient amount of effective impulses to establish a vital rhythm within the organism. It is obvious that each colour has a specific function to perform in the development of life, because it corresponds to certain elements active within the protoplasm; we see, therefore, that short rays, that is, those relating to the Blue-Violet end of the spectrum, promote photosynthesis, activate the circulation of the sap and encourage growth, stabilizing and controlling at the same time the Stimulating Effects of other agents such as: Water, Air, etc... It is a well-known fact that the awakening of vegetable life always takes place in the early months of the year when short rays are the most active, influencing even the growth of potted plants.

Seeds always begin to germinate in the first hours around sunrise; juices and the fluid parts of the plant are most concentrated at that time and the etheric oils contain their highest quality just before sunrise; it is known, for example, **that the picking of flowers for the purpose of extracting their essential oils is always conducted at those early hours of the day.**

The middle part of the spectrum where the green potency predominates is most important in the development of stems, leaves, fibres and cellulose.

It is also during the month of June that the fleshy parts of vegetable anatomy reach their full growth and that foliage and grasses are most abundant.

The yellow potency of light induces the maturing of flowers; blossoms display their fullest development from June to August, as well as around the early afternoon hours of the day. As the longer end of the spectrum comes more into power the time for the ripening of fruits and seeds is at hand, and it is the orange and red radiations which contribute their share in the production of a complete organism. Time and Place are thus the 2 great factors in physical life, everything that happens within the universe is subject to their law and carries within its nature the stamp of their action. The more complex the organism the more difficult it is to follow the subtle reactions affecting the protoplasm, but even as we turn to man it is not impossible to observe the important part played by the various parts of the spectrum in influencing the growth and development of life.

In the healing arts it is already a well-known fact that light and colours exert a very definite action from the therapeutic point of view. In the course of my experiments I have made another important discovery pertaining to one particular type of radiations which always sustain a harmonious balance of light even when used alone. This biological energy is located within the central portion of the visible spectrum, and spectroscopic examinations have proved that it contains the complete biological range of all colours, extending even to the Ultra-Violet and Infra-Red.

Extremely interesting reactions have been observed using those radiations in a condensed strength, focusing them with lenses upon infusoria. Adult cells which had already reached the stage of maturity have been activated to a rapid division, followed by an early inhibition of their vital processes.

In young cells, which had not yet reached the stage of reproduction, the life cycle has been speeded up by shortening the period between birth and death before they had time to multiply, arresting thus the progress of further reproduction.

The healing effects produced by light and colours are undoubtedly due to its direct action upon the protoplasm, and the speed and subtlety of reactions are proportional to the biological condition of the organism.

The Curative Power of Chromo-Therapy Resides In Its Selective Property of Penetration, but what that penetration actually is or how it operates within the body is still a matter of little understanding even to some of those who use and apply the various methods and modalities.

All physical bodies are made up of Electro-Magnetic Points of Energy or "elements" in their most subtle state of rarefication; health of a body is a proof of their "ionic equilibrium" and the maintenance of that equilibrium depends on a harmonious and rhythmic circulation of that dynamic energy. In order to understand fully the actual significance of that process it is absolutely imperative to establish a definite conception as to what the nature of active energy is and how it is related to a physical body.

Energy: be it Electricity, Magnetism, Light, Colour, or what not, must possess a certain degree of substantiality in order to produce an impression.

Colour Is Vibration, and since Vibration is a sign of a "molecular tension", it is easy to understand that; The Application of Light and Colour to the Body for Therapeutic Purposes Must Produce a Relative Molecular Reaction.

We must always remember that: Light is not something separate from us, something outside of us, but that it is the Same Energy which enters into the composition of every single cell of our body, and which holds our physical structure in perfect equilibrium.

In studying the subject of Light and Colour, in relation to Life it is therefore absolutely essential to recognize and understand that there is a law of Spectro-Biological correspondence which binds all aspects of manifested existence into one integral whole.

Light Is The Basic Biological Agent intended by Nature for the preservation of health and life, and in giving out the little knowledge and experience which I have gained in that field, **I sincerely hope and wish that this little book will help to utilize that great cosmic biological energy for the service and benefit of humanity."** - Countess Maryla de Chrapowicki, D.Psy., in "Spectro-Biology; Light and Colour Therapy", 1938.

"The Law of Life Is Motion, a rhythmic cyclic pulsation of radiant energy which always tends to preserve and restore balance and harmony, its measured periodic vibrations throbbing through space complete with every beat, a minor cycle within the major wave of the great cycle of evolution. As this rhythmic factor becomes more, and more evident, so does man begin to notice the unfoldment of an intricate pattern of radioactive substances which act as a bridge between the tangible and the intangible or tenuous states of life, and this bridge reveals a synthetic Unity of Mind and Body. Life is a manifestation of a ceaseless exchange between various degrees of matter. The character of the energy implanted in the body during that activity is, above all, ionic before it becomes molecular, for it proceeds from the sphere of radiation. But man perceives only the secondary physical effects, those which manifest on the plane of matter and which are recognized as molecular activity." *- Countess Maryla De Chrapowicki, D.Psy., in "Biotonic Therapy; Therapeutic Use of Life Energy", 1952.*

The Physical Action of Light Energy

"It is possible that there may be some particular sympathetic resonance between atoms and light frequencies, as, for example, between oxygen atoms and ultra-violet light frequencies. The following theories and facts are generally accepted throughout the scientific world to-day, and help to elucidate the problem of the action of vibratory energy. All matter, whether organic or inorganic, is in a state of continual motion as regards its molecular or atomic structure. As we go up or down the scale this motion increases or decreases as we go up or down the temperature scale, until it theoretically ceases at absolute zero. The motion is vibratory and depends, so far as its changes are concerned, upon the vibrations in the radiant energy acting upon the body of which the molecules are constituents. When the vibration is of sufficiently high frequency, the molecules break down into simpler forms, and the more complex the molecule, the lower is the frequency of vibration necessary to produce this result. In the ethereal vibration of radiant energy, the temperature of the body is raised. This William H. Bean ("A theory as to the Roentgen Ray Action upon Malignant Neoplasms", Advanced Therapeutics, May 1902), regards as proof that one form, at least, of molecular vibration is induced by an ethereal vibration. The physician's conception of light should not be from the point of optics and concern the visual frequencies only, i.e., from and including the red, to and including the violet, but must embrace the invisible part of the spectrum also. That mysterious region known as the ultra-violet is of equal interest to the physicist and physician, as is also the invisible region below the red." - Dr Dr. Margaret A. Cleaves, MD, in "Light Energy: Its Physics, Physiological Action and Therapeutic Applications", 1904.

All Matter Is In a State of Continual Motion

"All matter, organic and inorganic, is in a state of continual motion as regards its molecular or atomic structure, and this motion increases or decreases, as we go up or down the temperature scale, till it theoretically ceases at absolute zero.

The motion is vibratory and depends, so far as its changes are concerned, upon the variations in the Radiant Energy acting upon the body of which the molecules are constituents.

When the vibration is of sufficiently high frequency, the molecules break down into simpler forms, and the more complex the molecule the lower is the frequency of vibration necessary to produce this result.

Radiant Energy, or this means we have of raising the temperature of a body, is an Ethereal Vibration; consequently, one form at least of molecular vibration is governed by an Ethereal Vibration.

Light, in the ordinary use of the word, means the manifestations of those components of certain Ethereal Vibrations which go to make up that portion of the spectrum between and including Red and Violet; but here let us use it in its wider sense, meaning those Ethereal Vibrations which are propagated at right angles to the directions of their vibrations.

Now, while many chemical actions will not take place till a certain temperature is reached; i. e., certain molecular vibration period attained; many others can be brought about by exposure to light, which may or may not change the temperature, but which manifestly must have influenced the molecular vibrations.

This action differs in different parts of the Spectrum, but from the lowest end to the highest the variation is due only to the different wave lengths, or what amounts to the same thing, the variation in frequency of vibration.

Here we have another form of molecular activity influenced by another form of Ethereal Vibration.

In considering the phenomena and laws of sound we note that a body capable of giving out a musical note does so, not only when struck, but also in response to vibrations which come to it through the air from another vibrating body.

We know that all forms of life are favourably influenced by light and heat; consequently, we may infer that these factors contain some form of ethereal vibrations which are capable of eliciting a responsive atomic motion peculiar to the molecule of the cell in question, but possibly so far removed from its own period of motion that the response is feeble (compared with what we could imagine), yet quite sufficient for its ordinary maintenance." - William Hill Bean, in "A theory as to the Roentgen Ray Action upon Malignant Neoplasms", The Journal of Advanced Therapeutics, 1902.

The Cellular Effect and Benefit of Near-Infrared Wavelengths

"It affects us at the cellular level. It affects our mitochondria. It affects the energy production. It enhances the cell and the components in the cell to work more efficiently.

Neurologic Conditions

There are promising studies on neurodegenerative disorders:

1. Acute Ischemic Stroke.
2. Depression.
3. Anxiety.

It modulates Serotonin levels and Endorphins." - Dr Brooke Miller, MD

> ***"Melatonin is one of the most powerful Antioxidants in our cell, Near-Infrared Light Therapy will increase the ability of the cell to clear those Reactive Oxygen Species."*** *- Dr Ryan Cole, MD*

Important Clinical Advise on the Application of Light Therapy

1. Start Slowly: Begin with short sessions and assess tolerance.

2. Consistency Is Fundamental: Regular, shorter sessions often yield better results.

3. Holistic Approach: Combine red light therapy with diet, hydration, sleep, exercise, and grounding for optimal benefits. "This is just one of many things that you can do to enhance your health. But your diet, your exercise pattern, your sleep, your sunlight exposure, Vitamin D - nothing really takes the place of those." - Dr Brooke Miller, MD

There must be Consistency in the Activities of the body, not only in the Application of the Electrical Forces, but there must also be Consistency in the Manner of Life, and its Application of its Abilities Towards Constructive Forces or Influences.

Red Light Therapy Equipment

Appropriate Wavelengths:
Skin-level therapy: 660–670 nm
Joints, Muscles, and Deep Tissues therapy: 800–850 nm
Deeper Tissue and Neurological Conditions therapy: 1000+ nm
Adequate power density (milliwatts per square centimeter).
Minimal electromagnetic field (EMF) radiation exposure." - in "The Science Behind Red Light Therapy", Independent Medical Alliance, 12 June 2025

Chapter 7

The Foundation For Light Therapy

“The Foundation for Light Therapy”, Charitable, Non-Profit Scientific and Humanitarian Organization 501(C)(3), Florida, U.S.A., July 2000 to 2014.

The Foundation has Compiled Extensive Research, and Irrefutable Evidence of the Efficacy of Light (Light Energy) in various frequencies, intensities and modalities has the ability to destroy pathogens in the blood, specifically bacterial and fungal. **The purpose of the Foundation; is to be instrumental in the further development, experimentation and implementation of Light Therapy and Light Technologies. Foundation for Light Therapy will continue to enlist the expertise of medical professionals, institutions, organizations and specialists to help with these Promising Treatments.** Researchers have long suspected that the key to curing many illnesses lies within the human body itself.

This notion of **stimulating the body’s own immune system, as a weapon against diseases** has been with us for at least a century. The following information will help illustrate that through the years new, innovative ideas, which did not conform to the Medical Trade, thus have been overlooked, and intentionally suppressed. The focus of the Foundation has been to researcher and identify safe and effective alternative methods of disease prevention, treatments, and cures.

Utilising Oxygen and Light Therapy

Our Work Has Been Extremely Gratifying.

The Foundation has identified and successfully tested, proved, and improved the efficacy of Oxygen Therapies often referred to as “Oxidative Medicine”, and the associated delivery systems.

For over 100 years Oxygen Therapies has been referred to by many names in literature such as Photoluminescence, Ultraviolet Blood Irradiation (UVBI), Ultraviolet Light Therapy, Photopheresis, Bio-Photonics, Ozone and Hydrogen Peroxide. **Oxygen Therapies Are Effective and Inexpensive.**

These remarkable healing technique works by simulating the body’s immune system and has been especially effective against blood borne diseases.

It also has the added benefit of being able to resolve numerous infections simultaneously, without contributing to the increased incidence of negative drug interactions that are prevalent in current medical practice.

There are little or no documented side effects!

The Foundation has compiled compelling Evidence that Oxygen Therapies, Ultraviolet Light, Ozone, Hydrogen Peroxide, and other Treatment Therapies:

Are Efficacious.

Diseases that have been successfully treated with the Foundations Treatment Protocols include the following:

1. **So-Called "HIV/AIDS".**
2. **Tuberculosis.**
3. **Hepatitis C.**
4. **Upper Respiratory Diseases.**
5. **Chronic Fatigue Syndrome.**
6. **Diabetes.**
7. **Asthma.**
8. **So-Called "Human Papilloma "Virus".**
9. **Stomach and Intestinal Disorders.**
10. **Staph, and Blood Stream Infections.**
11. **Psoriasis.**
12. **Certain types of Cancers.**
13. **And a host of other diseases.**

Technological advances in electronics used in administering Ultra-Violet Treatments, and marked improvements made with photoactive substances have also elicited highly significant results, further development of these technologies can save millions of lives.

The Foundation has recently provided Oxygen, Light, and Oxidative Therapies in several African countries, and in the Dominican Republic.

The opportunity was given to demonstrate the effectiveness of these treatments.

The scientists and Foundation researchers who witnessed ongoing positive Treatment outcomes summarised the results as "highly promising".

Recipients of the treatments, and their significant others, often described the results as "miraculous" as health, and overall quality of life were restored quickly and inexpensively.

The Foundation will continue to enlist the expertise of medical professionals, institutions, organisations and specialists to help with these promising treatments.

The Foundation is attempting to facilitate the establishment of properly controlled clinical studies within the FDA protocols.

The Foundation will provide all current date regarding Oxygen and Oxidative Therapies, treatment devices and delivery systems including "Energy Medicine" such as lasers, topical bio-modulators and Electro-Magnetics.

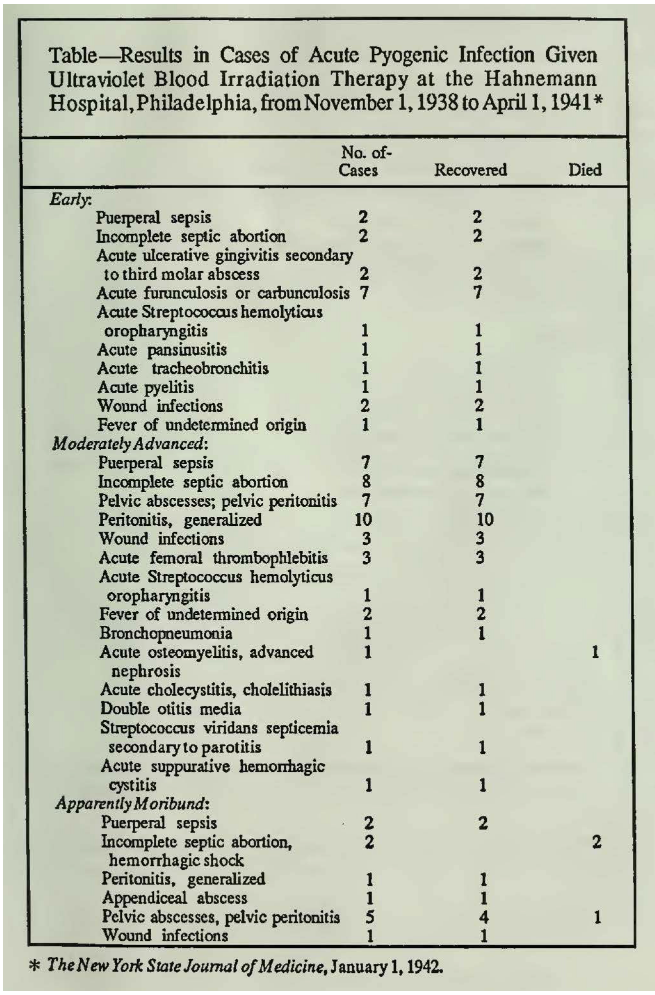
Ultra-Violet Light Therapy

1940

"Dr Henry A. Barrett, MD, Willard Parker Hospital, New York City, in 1940, Reported on 110 Cases including a number of Infections; **29 Different Conditions Responded Favourably to Ultraviolet Irradiation Blood Therapy:**

1. Arthritis.
2. Septic Abortion.
3. Osteoarthritis,
4. Tuberculosis Glands.
5. Chronic Blepharitis.
6. Mastoiditis.
7. Uveitis.
8. Furunculosis.
9. Chronic Paranasal Sinusitis.
10. Acne Vulgaris.
11. Secondary Enemia.
12. Etc...." - Dr H.A. Barrett, MD, in **"The Irradiation of Autotransfused Blood by Ultraviolet Spectral Energy.** Result of Therapy in 110 cases", Med. Clin. North America, 1940; **"Five Years Experience with Hemo-Irradiation according to the Knott Technic"**, American Journal of Surgery, 1943.

> *"**The Detoxification Effect of Ultraviolet** is generally not known by the medical profession. **The Inactivation of Snake Venoms, and Bacterial Toxins are examples of what may be accomplished by Ultraviolet.**" - Dr Miley, MD, in **"The Knott Technique of Ultraviolet Blood Irradiation in Acute Pyogenic Infections"**, New York State Journal of Medicine, 1 January 1942.*



Table—Results in Cases of Acute Pyogenic Infection Given Ultraviolet Blood Irradiation Therapy at the Hahnemann Hospital, Philadelphia, from November 1, 1938 to April 1, 1941*

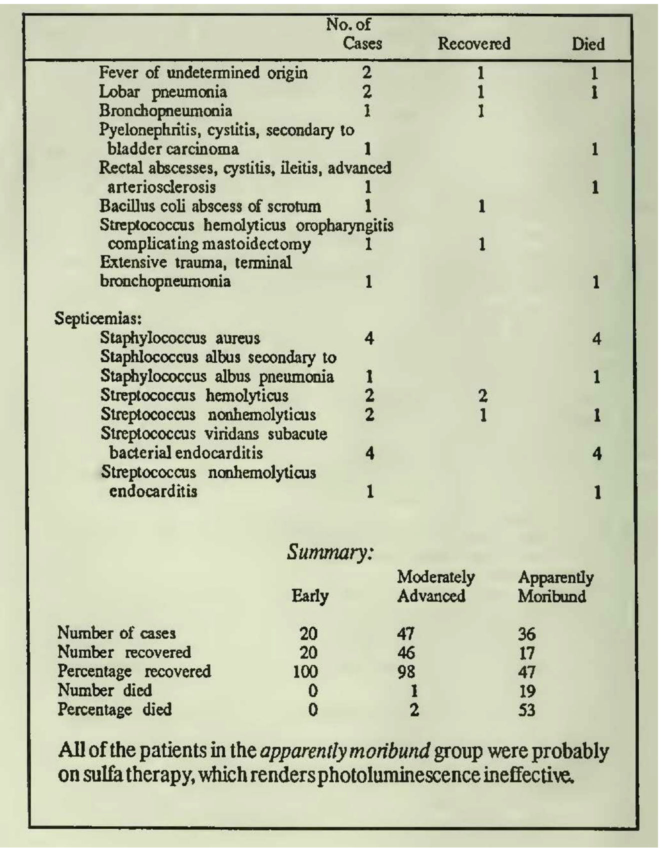
	No. of-Cases	Recovered	Died
Early:			
Puerperal sepsis	2	2	
Incomplete septic abortion	2	2	
Acute ulcerative gingivitis secondary to third molar abscess	2	2	
Acute furunculosis or carbunculosis	7	7	
Acute Streptococcus hemolyticus oropharyngitis	1	1	
Acute pansinusitis	1	1	
Acute tracheobronchitis	1	1	
Acute pyelitis	1	1	
Wound infections	2	2	
Fever of undetermined origin	1	1	
Moderately Advanced:			
Puerperal sepsis	7	7	
Incomplete septic abortion	8	8	
Pelvic abscesses; pelvic peritonitis	7	7	
Peritonitis, generalized	10	10	
Wound infections	3	3	
Acute femoral thrombophlebitis	3	3	
Acute Streptococcus hemolyticus oropharyngitis	1	1	
Fever of undetermined origin	2	2	
Bronchopneumonia	1	1	
Acute osteomyelitis, advanced nephrosis	1		1
Acute cholecystitis, cholelithiasis	1	1	
Double otitis media	1	1	
Streptococcus viridans septicemia secondary to parotitis	1	1	
Acute suppurative hemorrhagic cystitis	1	1	
Apparently Moribund:			
Puerperal sepsis	2	2	
Incomplete septic abortion, hemorrhagic shock	2		2
Peritonitis, generalized	1	1	
Appendiceal abscess	1	1	
Pelvic abscesses, pelvic peritonitis	5	4	1
Wound infections	1	1	

* *The New York State Journal of Medicine,* January 1, 1942.

New York State Journal of Medicine, 1 January 1942

*"**Vasodilation has been observed to occur wherever Ultraviolet is used,** and has been reported by Balderrey and Barkus; T. Lewis, Krogh, Ellinger, and Kawaguchi." - in "The Hahnemannian Monthly", Vol. 77, 1942.*

*"**The Increase of Blood Irradiated with Ultraviolet to Absorb Oxygen has been demonstrated.**" - in "Journal of Nutrition", 1931; G. Miley, in "American Journal of Medical Science", 1939.*



	No. of Cases	Recovered	Died
Fever of undetermined origin	2	1	1
Lobar pneumonia	2	1	1
Bronchopneumonia	1	1	
Pyelonephritis, cystitis, secondary to bladder carcinoma	1		1
Rectal abscesses, cystitis, ileitis, advanced arteriosclerosis	1		1
Bacillus coli abscess of scrotum	1	1	
Streptococcus hemolyticus oropharyngitis complicating mastoidectomy	1	1	
Extensive trauma, terminal bronchopneumonia	1		1
Septicemias:			
Staphylococcus aureus	4		4
Staphlococcus albus secondary to Staphylococcus albus pneumonia	1		1
Streptococcus hemolyticus	2	2	
Streptococcus nonhemolyticus	2	1	1
Streptococcus viridans subacute bacterial endocarditis	4		4
Streptococcus nonhemolyticus endocarditis	1		1

Summary:

	Early	Moderately Advanced	Apparently Moribund
Number of cases	20	47	36
Number recovered	20	46	17
Percentage recovered	100	98	47
Number died	0	1	19
Percentage died	0	2	53

All of the patients in the *apparently moribund* group were probably on sulfa therapy, which renders photoluminescence ineffective.

New York State Journal of Medicine, 1 January 1942

1947

"Continued work in the **Treatment of Sulfa Drug Failures,** has greatly strengthened our original belief that **Sulfa sensitive infections are easily and favourably influenced by Ultraviolet Blood Irradiation Therapy**, and that **a large variety of infections not controlled by Sulfa Drugs can be rapidly and efficiently controlled by Ultraviolet Blood Irradiation Therapy.**

In 60 cases of Sulfa Drug Failures, Ultraviolet Blood Irradiation Therapy Was Found Successful in controlling the acute infection in most instances acute infections, were found, when treated by Sulfa Drugs, to be either uninfluenced or, as occurred in a majority of cases, the infection was believed to have spread more rapidly than ever following the use of Sulfa Drugs. This was in sharp contrast to the rapid subsidence of such infections when treated with Ultraviolet Blood Irradiation Therapy alone or after Sulfa Drug failure. It is our **carefully considered opinion that, in the treatment of most acute pyogenic infections, Ultraviolet Blood Irradiation Therapy is a far safer and Much More Efficient Method of Treatment than is Chemo-Therapy with Sulfa Drugs.**

> ***"As a rule, rather low dosages of externally applied Ultraviolet Radiations Stimulate The General Resistance To Infection."*** *- in* ***"Ultraviolet Radiation and Resistance to Infection"****, Copenhagen, Congres. Internat. Lum., 1932.*

Treatment of Penicillin-Resistant Infections

In Penicillin-Resistant Cases, we have found that Ultraviolet Blood Irradiation Therapy is a valuable therapeutic agent, when used to control penicillin-resistant infections. The chief penicillin-resistant infections in which we have used Ultraviolet Blood Irradiation Therapy to control the infection have been those due to Streptococcus Hemolyticus, and Colon Bacillus.

As a result of our experience in the use of Ultraviolet Blood Irradiation Therapy in penicillin resistant cases, we have been able to make the following pertinent observations:

1. As might be expected, patients who have received penicillin without effect do not come to us as a rule with the profound Toxemia, that is so uniformly present in Sulfa Drug Failures. **Since No Extra Toxic burden has been added to the patient by the drug used, More Can Be Expected From the use of Ultraviolet Blood Irradiation Therapy in pure penicillin resistant failures,** than in Sulfa Drug failures, provided that patient is not first seen in a hopelessly moribund state.

2. **There is no contraindication to the combination or synchronized use of penicillin with ultraviolet blood irradiation therapy,** as is the case with Sulfa Drugs. Penicillin can be given safely before, during or immediately after ultraviolet blood irradiation therapy, since there is no photosensitization factor to be considered

3. **Inasmuch as Ultraviolet Blood Irradiation Therapy controls certain infections rapidly and efficiently, and penicillin does not, Ultra Violet Blood Irradiation Therapy must be considered the procedure of choice in these infections.**

4. **The rapid and favourable response of Staphylococcus Septicemia to either Ultraviolet Blood Irradiation Therapy** or penicillin used independently of the other, plus the lack of contraindication to a combined use of both agents, suggests that the ideal treatment for all severe Staphylococcic Infections is the combined treatment of the infection, using both ultraviolet blood irradiation therapy and penicillin simultaneously.

5. **Ultraviolet Blood Irradiation Therapy by its very non-specificity has many advantages over penicillin in that it provides safe, rapid and efficient control of acute fulminating infections, regardless of whether or not such infections are due to penicillin sensitive bacteria.**

Blood Irradiation Alone in Acute Infections

1. Ultraviolet Blood Irradiation Therapy used alone is the ideal method of controlling acute bacterial infections either of an acute pyogenic nature.

2. It is a safe, reliable and non-specific method of controlling acute infections.

3. It insures adequate ultraviolet intake to those whose protective immunological reactions are in the process of deterioration. **This deterioration, even when progressing rapidly, has been observed to be reversed in a definite manner following ultraviolet blood irradiation therapy, resulting in consistent clinical improvement.**

4. A marked decrease in hospitalization time for such infections has been observed by us as well as other workers in the field following the use of this method.

5. When Blood Irradiation was used in the Acute Infections, the use of sulfa drugs or penicillin was believed to be entirely unnecessary, with the possible simultaneous use of penicillin in Staphylococcus Septicemia and the absolute use of penicillin in Bacterial Endocarditis.

6. The detoxification effect originally reported to occur 24 to 48 hours after the use of Ultraviolet Blood Irradiation Therapy in Acute Pyogenic Infections was also noted after its use in Infections. This finding has also been recorded by Barger and Newman, in Acute Bulbar Poliomyelitis patients following Ultraviolet Blood Irradiation Therapy.

The Use of Ultra Violet Blood Irradiation Therapy Before Operation Preoperative Protective or Rebbeck Effect

Rebbeck originally described the occurrence of a powerful preoperative effect following **The Use of Ultra Violet Blood Irradiation Therapy Before Operation**, i.e., uterine dilatation and curettage in cases of incomplete septic abortion. We have repeated this work in 26 consecutive cases, and can definitely confirm this original report of Rebbeck's. **We have likewise found that one may remove with impunity infected teeth, and tonsils in the face of an acute rheumatic process with, or without associated myocardial damage. The tremendous potentialities for preoperative protection should be obvious to both surgeon and internist who are constantly faced with the well known dilemna of the poor surgical risk patient with dangerous foci of infection producing or aggravating the chief disease process**. It seems to us that Rebbeck's contribution to safer surgery is most important; furthermore, his preoperative protective effect has been confirmed by others besides ourselves, notably Hancock, Moser, Olney and Barrett.

Case Report

Case 1. A female, 54, admitted to Hahnemann Hospital, Philadelphia, Pennsylvania 5 July 1942: Complaining of a severe pain in the right side and a full burning sensation in the rectum.

On 3 August 1942, her temperature rose to 104.2°F. The patient was sigmoidoscoped and a large amount of pus drained from an abscess at the rectosigmoid junction. 6 August, was apparently moribund with Cheyne-Stokes respiration, showing a rapidly falling blood count, temperature of 104°F, **increasing Toxemia and a rapid spread of the infection. The patient was semi-comatose, anuric, edematous and in early shock.**

Her extremely toxic condition was believed to be due to 2 factors:

1. Overwhelming Toxemia of Bacterial Infection,
2. The toxic effects of sulfathiazole, which failed to control infection.

Ultraviolet Blood Irradiation Therapy with 200 cc. of citrated blood was given, and Sulfa Drugs were stopped; the patient's condition improved with supportive fluids and blood transfusions during the next 48 hours.

Her temperature dropped to a level of 101°F to 102°F.

The toxic condition subsided slightly and the patient was more rational, taking some food and voiding normally for the first time in more than a week.

On 10 August 1942 a second Ultraviolet Blood Irradiation with 275 cc. of citrated blood was given after which the patient's temperature receded to nearly normal with a marked improvement in her general condition.

The white count rose to 11,700 from the pre-irradiation value of 6,000.

The patient now had normal bowel movements, ate well and regained strength.

Rectal examination produced no more pus, but a mass in the sigmoid could still be felt.

On 19 August, the patient's temperature, pulse and respiration rose to 102°F, 130, 38 respectively and her condition deteriorated somewhat.

The white blood count was 9,600.

Another Ultraviolet Blood Irradiation of 275cc. of citrated blood was given to which the patient responded in 48 hours with a normal temperature, a subsidence of toxic symptoms, lowered pulse and respiratory rate to 100 and 20 respectively.

The diagnosis was para-rectal abscess, and perforation of sigmoid diverticulum with abscess formation, rapid spread of infection.

The patient made an uneventful recovery and was discharged 2 weeks later, on 2 September 1942, in apparently good condition.

Summary

1. **The study of the clinical effects of Ultraviolet Blood Irradiation in 445 consecutive,** and unselected cases of acute pyogenic infections has been made. Confirmation of our original preliminary findings was observed. **These findings showed that Ultraviolet Blood Irradiation Therapy Was a Rapid, Efficient and non-specific control of all types of acute pyogenic infections** (except bacterial endocarditis), **the use of which was characterized by a quick subsidence of toxic symptoms, a disappearance of bacterial proliferation and invasion and an uneventful convalescence.**

2. In 74 consecutive and unselected cases of infections we have observed results comparable to the favourable effects observed in its use in acute pyogenic infections.

3. **It was found that Sulfa sensitive infections are easily and favourably influenced by Ultraviolet Blood Irradiation Therapy, and that a large variety of infections not controlled by Sulfa Drugs can be rapidly and efficiently controlled by Ultraviolet Blood Irradiation Therapy.**

4. **Many penicillin-resistant infections Respond Favourably to Ultraviolet Blood Irradiation Therapy, both the acute pyogenic types and infections.**

5. **We were able to confirm the preoperative protective effect of ultraviolet blood irradiation therapy described by Rebbeck and fittingly called the Rebbeck Effect.**

6. There is no contraindication to the joint use of penicillin and Ultraviolet Blood Irradiation Therapy, but sulfa drugs cannot be safely used in the first 4 or 5 days following ultraviolet blood irradiation therapy.

Conclusions

1. Ultraviolet Blood Irradiation Therapy is the Safest and Most Efficient Method of controlling most acute pyogenic infections with one notable exception, namely, subacute bacterial endocarditis.

2. Ultraviolet blood irradiation therapy in our opinion is the procedure of choice in the treatment of sulfa-resistant and penicillin-resistant infections of the acute pyogenic infection type.

3. **Ultra violet blood irradiation therapy is the procedure of choice in the treatment of acute infections, and should be tried out universally for such infectious disease processes.**

4. **The preoperative use of Ultraviolet Blood Irradiation Therapy allows the safe removal of foci of infection in such serious disease as incomplete septic abortion with or without an associated septicemia, acute rheumatic fever with or without extensive myocardial damage, acute exacerbations of chronic rheumatoid arthritis and advanced bronchial asthma.**

5. It is our belief that Staphylococcemias can be most effectively controlled by joint use of penicillin and Ultraviolet Blood Irradiation Therapy.

6. **These results are in close agreement with those obtained by other workers in this field."** - Dr George Miley MD; Dr Jens A. Christensen MD, Blood Irradiation Clinic of the Hahnemann Medical College and Hospital of Philadelphia, Pa., in **"Ultraviolet Blood Irradiation Therapy**: Further studies in acute infections", The American Journal of Surgery, April 1947.

1948

"From observations made on the work done on animals a corrected or extended hypothesis was established. **The evidence accumulated so far seemed to indicate that the impingement of small, carefully regulated doses of selected ultraviolet rays directly upon the blood stream of test animals in some way increased the bactericidal properties of the blood stream; that by this method of treatment some influence was exerted upon the vital resistance factors of the host, enabling it to overcome the infection and to progress to complete recovery; that some influence was exerted upon the toxic conditions produced by the disease, either by direct action upon the toxins themselves or by indirect action on the toxins through the host's rallied defense mechanisms.** The literature searched earlier indicated that **certain known toxins had been inactivated directly by ultraviolet rays under given conditions**. The work on animals was carried on until it was definitely determined that the animals suffered no ill effects from the treatment and yet showed a clinical detoxification in vivo. **The first treatment on a human took place in 1928. Consultation held the patient to be in a moribund state from septic abortion complicated by hemolytic streptococcus septicemia.**

Ultraviolet blood irradiation therapy was instituted as a last resort to see if the septicemia in a human could be affected.

The patient responded to treatment and proceeded to an uneventful recovery.

She has since borne 2 children, and when last checked in 1940 was found to be in good health with a normal urinalysis and blood count.

Nothing further was done in the treatment of human patients until 1933.

This first became possible in 1933.

Dr Virgil K. Hancock, MD, Seattle, Washington, with Dr James Tate Mason, MD, felt justified in using the procedure as a last resort on a patient, apparently moribund, with Advanced Hemolytic Streptococcus Septicemia.

This case was described in detail by Hancock and Knott in the first published article reporting this technic. Successful conclusion of the case led to further use in similar cases of serious nature in which it was believed the patient was in a moribund state. In a series of 75 cases in which the diagnoses were confirmed by x-rays, all patients were treated by this method and, according to Hancock, the method Was Found to be Extremely Valuable in combatting the Pneumonia.

The course of the disease following Ultraviolet blood irradiation was marked by a rapid fall in temperature, disappearance of cyanosis, often within 3 to 5 minutes, cessation of delirium if present, a rapid subsidence of toxic symptoms generally, a marked reduction in pulse rate and a rapid resolution of consolidation.

A shortening of hospitalization and convalescence occurred regularly. This procedure was later found by Miley to be Especially Valuable in the Treatment of pneumonia in which Chemotherapy Had Proven of Doubtful Value. Dr George P. Miley, New York, was one of the early workers with the procedure after Knott improved the chamber and released them to physicians for further accumulation of clinical data.

Miley became interested in the Oxygen Exchange Factor, suspected and commented upon by Knott. He was Particularly Impressed by the Rapid Disappearance of Cyanosis Following Treatment. Miley made extensive studies on the combined Oxygen values of venous blood before and after irradiation in pathologic states. This work was published in June 1939, a**nd showed a General Increase in the combined Oxygen value of venous blood Following Irradiation.**

The procedure has been used clinically and reported upon by several workers following Hancock and Knott's article on the treatment of infections with the method. Barrett discusses 5 years experience and reported on irradiation of blood with ultraviolet spectral energy in 2 articles.

Miley published articles on the use of the procedure in the Treatment of:

1. **Thrombophlebitis.**
2. **Staphylococcemias.**
3. **Botulism / Poliomyelitis.**
4. **Non-Healing Wound.**
5. **Acute Pyogenic Infection.**

And Miley and Co-Workers have reported its use in the Treatment of:

1. **Peritonitis.**
2. **Acute Infections.**
3. **Asthma.**

Encephalitis

In addition Barger quoted in detail **3 Cases of Advanced Encephalitis in which he had used Ultraviolet Blood Irradiation, stating that in each case following this type of treatment a rapid disappearance of all signs and symptoms of Encephalitis occurred,** and that no residuals were apparent after from 6 months to 3 years.

Rebbeck has reported its use in the Treatment of:

1. **Escherichia Coli Septicemia.**
2. **Postabortional Sepsis.**
3. **Puerperal Sepsis.**
4. **And its Use Preoperatively.**

Rebbeck and co-workers reported its use in the Treatment of:

1. **Peritonitis.**
2. **Double Septicemia.**

Typhoid Fever

Rebbeck and Lewis have **found in 9 consecutive cases of Typhoid Fever, that in 6 patients who received Ultraviolet Blood Irradiation there was a Remarkably Rapid Recovery** as contrasted with 3 control cases in which 1 death occurred.

Biochemical and Physiologic Effects

The Favourable Clinical Results observed Are Due To Many Biochemical and Physiologic Effects:

Notably an increase in blood Oxygen absorption, a rise in phagocytic action and general immunologic status, the setting up of an efficient detoxifying mechanism, and increased rate and volume of blood flow through the capillary circulation and beneficial alteration chemically of certain important constituents of the blood, e.g., adrenalin, dihydroxy-phenylalanine, cysteine hydrochloride, glutathione and ergosterol.

Ultraviolet Blood Irradiation Therapy
Powerful Therapeutic Agent

Thus, Ultraviolet Blood Irradiation Therapy; Must Be Considered as a Powerful Therapeutic Agent, in a wide variety of disease processes, since in using this method one is applying certain fundamental biochemical and physiologic effects." - E.K. Knott D.Sc., in "Development of ultraviolet blood irradiation", The American Journal of Surgery, August 1948.

1950

"A series of 336 patients is presented of which 110 consecutive unselected patients were treated preoperatively and postoperatively with Ultraviolet Blood Irradiation. A marked reduction in the number and severity of postoperative complications in the patients Treated with Blood Irradiation is shown:

1. **Abdominal Distension is remarkably decreased.**
2. **The need for antibiotic therapy is greatly minimized.**
3. **Complications of Phlebothrombosis and Thrombophlebitis are decreased.**
4. **Mortality is decreased."** - Dr E.W. Rebbeck MD, in "Use of Ultraviolet Blood Irradiation (Knott technic) in biliary tract surgery", The American Journal of Surgery, July 1950.

1989

“Photochemical Effects Upon the Cornea, Skin and Other Tissues.

Summing Up: it is possible to conclude that irradiation with monochromatic visible light in the Blue, Red, and Far Red regions can enhance metabolic processes in the cell and can activate proliferation. The data indicate that irradiation causes a rearrangement of the cell metabolism, light being only in the role of a trigger. This is the reason the doses needed for causing bio-stimulation effects are comparatively low (10- lo3 J/m2) and the irradiation times needed are short (10-100 s).

Conclusions:

1. Laser bio-stimulation is a photo-biological phenomenon. Coherent light is not needed.
2. Primary photo-acceptors are components of the respiratory chain. This explains the universality of low-power laser effects.
3. The respiratory chain components can be the photo-acceptors in the case of cellular metabolism stimulation, as well as inhibition depending on the dose of light. At low doses, irradiation causes redox regulation of cellular metabolism; at high doses photodynamic damage prevails.
4. Light quantum is only a trigger for cellular metabolism regulation. This explains the low doses and intensities needed.
5. The magnitude of the bio-stimulation effect depends on the physiological state of the cell before irradiation. This explains why the bio-stimulation effect is not always possible.
6. The therapeutic effects of low-power laser irradiation can be explained by an increase of proliferation of G0 and G1 cells or by changes in the physiological activity of excitable cells.

The positive effects of Phototherapy in the case of “systemic” treatment (e.g., pain relief) can be explained by the fact that low-intensity light (Blue, Red) acts on excitable cells (myocardial cells, neurons) to generate action potentials in them, and to alter their beating frequency, etc. (Arvanitaki and Chalazonitis 1947; Salet et al. 1979; Uzdenskii 1982).

Proof can be found in these works; that **Photoreception occurs on the level of mitochondria and that the intensification of respiratory metabolism of the excitable cell affects the electrophysiological properties of the cell membrane.**

It is quite possible that **the universality of low-power laser effects is due to the universal photobiological mechanism-variation of the redox state of the respiratory chain components leading to the changes in the physiological state of the cell (i.e, the increase of the proliferation activity of non-excitable cells or changes in activity potentials of excitable cells).**

It is proposed that **enhanced wound healing due to irradiation with low-intensity visible laser light (He-Cd, He-Ne and semiconductor lasers) is due to the increasing proliferation of cells."** - in "Photobiology of Low-power Laser Effects", Health Physics, May 1989.

1990

In 1990 the FDA approved the use of a Photopheresis machine for study, developed by Dr. Eldeson and a company called THERAKOS. They were granted preliminary certification to perform clinical trials studies with HIV and Graft Host Diseases. Studies which were performed by Columbia University's Photopheresis Unit in Morristown, NY, demonstrated that 4 of 7 patients (57%) with so-called "HIV/AIDS" became NEGATIVE after 5 to 19 treatments and remained so for 14 to 16 months after termination of the study. (Taken from the Annals of New York Academy of Sciences.)

1993

"In 1993, Quantum Devices (Barneveld, WI) developed a Light-Emitting Diode (LED) for NASA to use in their plant growth experiments. The experiments demonstrated that **Red LED wavelengths could Boost Plant Growth,** but coincidentally the scientist's **skin lesions began to heal faster** as well.

NASA subsequently began to study the use of **LED to increase the metabolism of human cells and stem the loss of bone and muscle** in astronauts.

Low-Level Laser Therapy has been actively used for nearly 40 years, during which time it has been known to: Reduce Pain, Inflammation, and Edema.

It also has the ability to **promote healing of wounds, including deep tissues and nerves, and prevent tissue damage through cell death.**

Clinical Applications

The 4 common targets for Low-Level Laser Therapy are:

1. **Lymph Nodes to reduce edema and inflammation.**
2. **Site of Injury to promote healing and reduce inflammation.**
3. **Nerves to induce analgesia.**
4. **Trigger points to reduce muscle spasms.**

The physician determines the correct synchronizations of continuous or pulsed laser emission. **Penetration depth is determined by wavelength and power.**

The U.S. Navy research determined **810 nm to be optimal for penetration.**

Treatment times are in the range of 30 s to 1 min, but there are many areas treated for comprehensible protocol, which often takes approximately 30 min to perform.

For stimulating repair and decreasing inflammation, 2.5 Hz pulse is recommended, while a continuous beam is ideal for analgesia and tender points." - in "A NASA Discovery has current applications in Orthopaedics", Current Orthopaedic Practice, January 2015.

1995

"NASA takes their first **Red Light Therapy devices to space to support tissue repair in astronauts, laying the foundation for light therapy applications in skin."** - in "Professional Beauty magazine", Australia, Iss.1, 2025.

2004

In 2004 the FDA approved a clinical trial for the non-pharmacological treatment of Hepatitis C under the Investigational Device Exemption. Non-responders to Interferon / Ribaviran were tested. As an example of the effectiveness of Ultra Violet Light Therapy in the trial of 13 individuals, it is reported that 3 subjects had sustained **"viral" load reductions of 90%, or greater, at 10 weeks post treatment, and 8 had sustained reductions of 50%, or greater**, 2 subjects did not respond to the therapy. There were **no reported adverse events related to the therapy.**

2005

> ***"Tiny Light-Emitting Diode (LED) chips used to Grow Plants in space, are lighting the way for Cancer Treatment, Wound Healing, and Chronic Pain Alleviation."*** *- in **"Lighting the Way for Quicker, Safer Healing"**, NASA, 2005.*

In 2005, So-Called "HIV/AIDS" clinical trials were held in the Dominican Republic by one of our research doctors proving **Ultra Violet Light Therapy was safe and effective in the Treatment of So-Called "HIV/AIDS", 36 patients were treated with the Ultra Violet Light Therapy, With Outstanding Results.**

2007

A recently developed non-invasive, sub-lingual HMR Ultra Violet Delivery Device breaks into the world of Alternative Medicine. No one could have projected its efficacy and economical use. For the last couple of years it has been tested rather extensively in Africa and the results are impressive. Its effectiveness and ease of application astounds most medical professionals familiar with the Ultra Violet Light Treatment. Almost 200 patients in Africa are reporting undetectable So-Called "viral" load levels. After research we have come to believe that this is the first time in the history of the "HIV/AIDS" from a So-Called "virus", that a combination of a negative Elisa Test, and an undetectable "viral" load test, was achieved after having been diagnosed with "HIV."

It is indicated that a few other accomplishments for this device has been: An efficacy for treatment of certain types of Cancers; The HMR delivery device has been shown to disarm Malaria; The HMR developers designed oxygenated water to compliment the HMR device; A newly designed HMR device has been manufactured in Japan; A partnership has recently been developed with Catholic Hospitals in Ghana; **The device reduced a Gangrene infection** in 88-year-old Israeli man.

Successful use of Ultraviolet Light Therapies has a history of more than 100 years. Through the 1940's and 1950's, it is estimated that dozens of physicians performed more than 300,000 clinical tests and besides their great curative success the most notable fact they mention is that not 1 person died from this treatment modality. Hundreds of clinical practitioners worldwide currently utilize this effective treatment modality for many blood borne diseases. Throughout the decades, data was developed worldwide proving the efficacy of Ultraviolet Light Treatments. Within today's FDA protocols, the information is considered "anecdotal".

It is time to incorporate Ultra-Violet Light Therapy, Oxidative Medicine and other proven Therapies into the clinical treatment protocols of today.

Ultra Violet Light Therapy Overview

It is well known Ultraviolet Light will: Purify and Deodorise Air, Sterilise Water, and Destroy Bacteria. Contaminated objects such as surgical instruments, bedding, room air and human skin is also cleansed rapidly of bacteria with the use of Ultraviolet light.

What is not well known, is the fact that:

Overwhelming Data, has been Accumulated Proving The Efficacy of Light in Various;

1. **Frequencies.**
2. **Intensities.**
3. **Modalities.**

Has the ability to Destroy Pathogens in the Blood; specifically Bacterial and Fungal.

This is Also Accomplished by Utilizing the Body's Own Natural Defences, to recognize and annihilate the sick, diseased cells.

Research into the use and **Efficacy of Ultraviolet Light for Treatment of Disease; was initiated in the 1870's, and continued until the late 1940's.**

One of the first researchers to experiment with Ultraviolet Light was Niels Ryberg Finsen (Nobel Peace Prize for Physiology of Medicine in 1903, for his Ultraviolet Treatments of 300 people with Lupus).

Another pioneer to experiment with Light Therapy was Kurt Naswitis, who directly irradiated the blood with Ultraviolet Light through a shunt in 1922.

Then beginning in the 1920's and continuing through the 1930's, Seattle scientist Emmet Knott, D.Sc., sought to harness, in an extracorporeal way, the known **Bactericidal Property of Ultraviolet Rays, in order to treat infectious diseases of the blood.** Knott built an apparatus that would remove blood from the body through a tube, citrate it to avoid coagulation, expose it in a small chamber to calibrated Ultraviolet Irradiation, and then pump it through a tube back into the body. **Dr Rebbeck, Dr Olney, and Dr Miley experimented successfully with light (Blood Irradiation / Ultraviolet Blood Irradiation Therapy / Ultraviolet Irradiation) in the 1940's. Ultraviolet Blood Irradiation Therapy came to be used to treat Bacterial, and Autoimmune Diseases.**

However, enthusiasm over the new Antibiotics and Vaccines in the 1950's, caused the Ultra Violet Blood Irradiation device to be placed on the shelf even though for certain indications:

1. **Hepatitis.**
2. **Pneumonia.**
3. **Streptococcal Toxemia.**

Ultraviolet Blood Irradiation Treatment was demonstrably superior.

In the 1970's interest in Ultraviolet Blood Irradiation Therapy revived in Russia. About the same time Dr Edelson, Yale University, developed a new form of Blood Irradiation termed "Photopheresis", which entailed triggering chemotherapy with a small dose of Ultraviolet Blood Irradiation Therapy.

By the 1990's, Russian physicians were using low-intensity lasers beamed down a wave-guide directly into the blood (Laser Blood Irradiation) to achieve roughly equivalent effects.

Regrettably, **Antibiotics, Vaccines, and Corticosteroids in the 1950's, put a halt to the growing interest in Ultraviolet Blood Irradiation Therapy. The Medical Trade was awash in enthusiasm over the new wonder drugs.** And only a handful of physicians continued to used Ultraviolet Blood Irradiation Therapy.

Even though it was illogical to set aside a Therapy that could treat the diseases of Chronic Hepatitis, and Pneumonia, that were impervious to antibiotics; which in fact happened.

Research into this Effective Therapy came to a virtual halt.

From 1955 to 1990's, only a few American physicians continued to work with a Ultraviolet Blood Irradiation Therapy.

The technique was never again taught in medical schools and training centers.

It is also hard to justify the way that American medical science has overlooked the many reports of clinical trials of Ultraviolet Blood Irradiation Therapy and Laser Irradiation Therapy, in Russian, and East German medical journals, and books over the past 2 decades, especially given the intense effort to identify promising approaches to the treatment of HIV and related conditions.

The infusion machine did, receive FDA "grandfather" status as a device that was sold and distributed in interstate commerce prior to 1976 (510 k) status.

The development of multi-drug resistance to antibiotics in recent years and the search for less toxic therapies have led to a renewed interest in Ultraviolet Blood Irradiation Therapy. **Millions of patients have been successfully treated with Ultraviolet Blood Irradiation Therapy, and scores of clinical trials have been conducted in Russia, Ukraine, and East Germany.**

Light Therapy is also used by other independent minded physicians around the world. **The Foundation For Light Therapy, as well as many public sector companies has accumulated irrefutable evidence that infectious blood borne diseases can be cured with the use of light and/or photoactive substances such as Light Activated Substance (LAS-1).**

Light Activated Substance "LAS-1"

"Scientists have now determined that the future for effective treatment with the least side effects is utilizing the body's own natural defences.

With this in mind The Foundation now presents some information regarding "Light Activated Substance No. 1" (LAS-1). Unlike vaccines and immunization, LAS-1 is used to stimulate the body's natural immune system. LAS-1 is the most exciting, promising, effective treatment that the Foundation For Light Therapy is aware of. It is essentially free of side effects, and initial results have been extremely promising. **The body is designed with a defence system against disease through which white blood "soldier" cells engulf "invading" foreign organisms. Under normal circumstances they self-destruct, taking the invader with them through a process of super oxidation (hydrogen peroxide).**

Infectious diseases carry toxins that prevent the natural production of hydrogen peroxide in the white "soldier" cell. The invading organism is then harboured within the white cell and although the cell continues to engulf the "invader", it does not have the ability to destroy it. LAS-1 works like an engine that forces the production of hydrogen peroxide within the white blood cell, resulting in the destruction of both the disease organism and the harbouring white cell. LAS-1 utilizes the body's own natural defences to recognize and annihilate the sick, diseased cells. Normal cells have an enzyme that inhibits oxidation and are therefore not affected by the drug.

In technical terms, LAS-1 (human), and LAS-2 (veterinary) are similar formulae, separated for regulatory reasons into two drugs.

Nevertheless, they both accomplish the same chemistry.

The chemical principal is the selective induction of high levels of Reactive Oxygen Species (ROS) (superoxides/peroxides/singlet oxygen) in infected macrophages (white cells that ingest foreign matter and invaders) and dysplastic cells (rapidly proliferating tumorous macrophage cells that couldn't handle the invaders). Normally these macrophages (big eaters) produce, through an enzyme system, high levels of ROS to destroy what has been engulfed.

These macrophage enzyme systems can be blocked from producing the Reactive Oxygen Species that kill the invaders by microbial toxins from the ingested organism. That's how disease takes hold and proliferates.

LAS-1 works best against intracellular infections which involve white cells in the blood and major organ systems that engulf and destroy invaders with peroxide under normal circumstances. The most compelling applications will be against protozoal (Malaria, Equine Meningitis & Babesia), Mycobacterial (Tuberculosis & Leprosy) and spore forming bacteria with civil defense implications (anthrax & plague). Babesia and equine meningitis are the best rollouts for veterinary markets. Malaria logically follows in humans as the primary rollout. The spore forming bacteria should be discussed with discretion at high governmental levels, with control of the technology not in the USA.

LAS-1 chemicals are highly concentrated (1000x greater than in normal cells) into intracellular infected cells and those that have become dysplastic from long term ROS incompetence. LAS-1 chemicals bypass the toxin blockade to forcibly stimulate the ROS. Fortunately, normal cells have mechanisms to prevent excessive concentration of LAS-1 and they modulate the excessive production of ROS. Otherwise, normal cells would explode. The ROS produced by LAS-1 induction cause the susceptible invaders to explode and the incompetent cell harbouring them to commit suicide (apoptosis). The invader and its safe haven both foam and explode. Normal cells or those loaded with antioxidants manifest nothing except a rise in metabolism." - in "The Foundation for Light Therapy", 23 February 2001.

Recent experiments have been proven to show that both Photo Therapy, and LAS-1 technologies, used intermittently, enhances the overall treatment process.

The therapeutic process of Light Therapy also referred to as "Photo Therapy" or "Photoluminescence", has far reaching clinical implications in the treatment and/or prevention of infectious diseases.

The word "Photoluminescence" sounds hi-tech, but it is an extremely simple and safe method of treating a patient.

"Photo" refers to light, and "luminescence" refers to the emission of light.

Over the last few decades it has been scientifically determined that Ultra-Violet Light, in a specific nanometer range has been most effective in destroying blood borne pathogens.

Recent technological innovations in electronic hardware, along with advances in bulbs and lasers, coupled with developments in photoactive substances have brought this technology to a breakthrough level.

In layman's terms, Photoluminescence causes a chemical reaction in which the shell walls are pierced killing the bacteria, and then by "marking" (identifying) them. The blood and the "debris" ("marked" dead bacteria), are then returned into the body "exciting" or stimulating the immune system.

The body's now "excited", natural "soldiers", or "killer" cells seek out and destroy the marked, identified diseased "invaders."

Fundamental Laws Governing the Mechanism of Photochemical Reaction:

1. Grotthus-Draper Law; Also known as the first law of photochemistry, states that:

> *"Only Light that is Absorbed Can Act Chemically."*

2. Bunsen-Roscoe Law:

> *"A photochemical change is proportional to the intensity and duration of illumination (exposure to light)."*

3. Stokes Law:

> *"The wavelengths of secondarily emitted rays are greater than the wavelengths of the primary exciting rays."*

4. Johannes Stark Law of Photochemical Equivalence:

> *"Each absorbed quantum should cause one light absorbing molecule to react photochemically."*

5. Walther Herman Nernst:

"Chain reactions are produced by continued secondary emanations"; is a scientific principle related to photochemistry and chemical kinetics.

This concept, posits that once a primary reaction is initiated, often by light absorption, the products of that initial reaction "secondary emanations", can continue to propagate further reactions, leading to a chain reaction.

Thus we readily see that the Mechanism Underlying the complex Photochemical Procedure of Photoluminescence, or Photo-Therapy must conform to certain known laws. The photochemical reaction itself is a desired effect, and can be utilized practically and predictably to obtain favourable clinical results.

Biochemists utilizing the laws of physics explain the following:

> ***"All Energy, and all Living Things Emit Light.***
> ***The body's blood cells emit light, but a weak or diseased cell, will emit more light than normal cells, thus rendering them more attracted and susceptible to light."***

Ultraviolet Light may be used as a source of Varying Energy.

Generally we may assume that in excessive amounts, Ultraviolet may be harmful to living beings; in optimum amounts it is of great practical value; and in inadequate amounts, it may have little or no effect.

In Photoluminescence Therapy, a small amount of blood, from 60cc's to 250cc's is drawn from the body, passed through a chamber, "treated" with Ultraviolet Light and returned to the body. In order to more fully understand how this mechanism works, a basic distinction between a bacterial cell, and a healthy cell, and how this pertains to Photoluminescence must be established.

Two photosensitive amino acids: Phenylalanine, and Tyrosine, are present in all cells in varying degrees. Bacterial cells contain at least 5 times as much of these amino acids as healthy red and white blood cells. Thus, bacterial cells have a much higher degree of photoactive sensitivity. **In addition, diseased cells are characteristically smaller in size,** with thinner shells. Through the process of photoluminescence the smaller bacterial cells are targeted and absorb 5 times as much photonic energy as their healthy counterparts.

The healthy cells remain intact while the diseased cells are killed and marked.

There is reason to believe that by destroying the bacteria in the treated sample of blood, an "autogenous (self-generated) vaccine" is produced.

When this vaccine is coupled with the photonic energy given off by the treated blood, "induced secondary energy" is produced and the bacteria in the patient's bloodstream are rapidly destroyed.

A "flushing" of the face normally occurs immediately after treatment.

This indicates an additional amount of Oxygen has been introduced into the blood stream. A slight rise in temperature may also occur, which is the body's natural reaction when the immune system is stimulated. The stimulated immune system continues its activity for hours and sometimes days after the treatment has been induced. The amount of treatments needed are determined by variables such as the state of health of the patient's immune system, length of time the patient has been ill, and the severity of the affliction(s).

Again, Photo or Light-Therapy is effective unto itself, as is Light Activated Substance (LAS-1). These technologies, used intermittently have produced even more favourable results and with no known side effects. Preventative therapy for healthy individuals can be taken once every 2 to 3 months.

Understanding Ultra-Violet Light Therapy

During his lifetime, Dr Popp, forged new ground in scientific communities when he demonstrated that the Body Cells emit a radiation of Light in the form of Biophotons. This Biophoton Cloud, also called Ultra-weak Photon Emission (UPE) is spontaneously emitted from the skin of humans. Dr Popp, **found this Spectrum of Colourful Electromagnetic Light Energies (Biophotons), form an intricate, highly organised System of Communication Between the Body Cells, and ultimately, it Contributes to the Regulation of All Body Physiological Processes.**

In other words, the Human Body Is Essentially a "Being of Light."

Man Is Essentially A Being of Light

"We know today that Man: Essentially Is A Being of Light. And the Science of Photobiology, proves this. In Terms of Healing, the Implications Are Immense. We now know, that quanta of light; can initiate, or arrest, cascade-like reactions in the cells, and that genetic cellular damage can be virtually repaired, within hours, by faint beams of light.

Understanding the Complex Relationship Between Light and Life

We are still on the threshold of fully Understanding the Complex Relationship Between Light and Life, but we can now say emphatically, that:

The Function of Our Entire Metabolism in Dependent on Light." - Fritz-Albert Popp

Fritz-Albert Popp, thought he had discovered a cure for cancer. It was 1970, and Dr Popp, a Researcher in Biophysics, particularly in the study of Biophotons, at the University of Marburg in Germany, had been teaching radiology; the interaction of ElectroMagnetic (EM) Radiation on Biological Systems. He'd been examining 2 almost identical molecules: benzo[a]pyrene, a polycyclic hydrocarbon known to be one of the most lethal carcinogens to humans, and its twin (save for a tiny alteration in its molecular makeup), benzo[e]pyrene. He had illuminated both molecules with Ultraviolet (UV) Light in an attempt to find exactly what made these 2 almost identical molecules so different.

Why Ultra-Violet Light?

Dr Popp chose to work specifically with Ultra-Violet Light because of the experiments of the Russian Biologist Alexander Gurwitsch, who, while working with onions in 1923, discovered that **roots could stimulate a neighbouring plant's roots if the 2 adjacent plants were in Quartz Glass pots, but not if they were in Silicon Glass pots.** The only difference being that the **Silicon filtered Ultra-Violet wavelengths of light while the Quartz did not.** Gurwitsch theorized that **onion roots could communicate with each other by Ultraviolet Light.**

> *"Some concluding Turlygin's remarks: 'From the viewpoint of physics, the most significant fact is that the behavior of a test person; the duration of the exposition; gives a clear optical picture, which can be explained only by the presence of radiant energy.* ***These experiments do not leave us in doubt about presence of radiation emanating from the human body."*** *According to Turlygin, he came to the conclusion that some of the properties and parameters of recorded radiation differ from electromagnetic radiation, for example, it does not deviate in the electric field of a capacitor." - in "Parapsihologija. Jenciklopedija zagadochnogo i nevedomogo", 2005.*

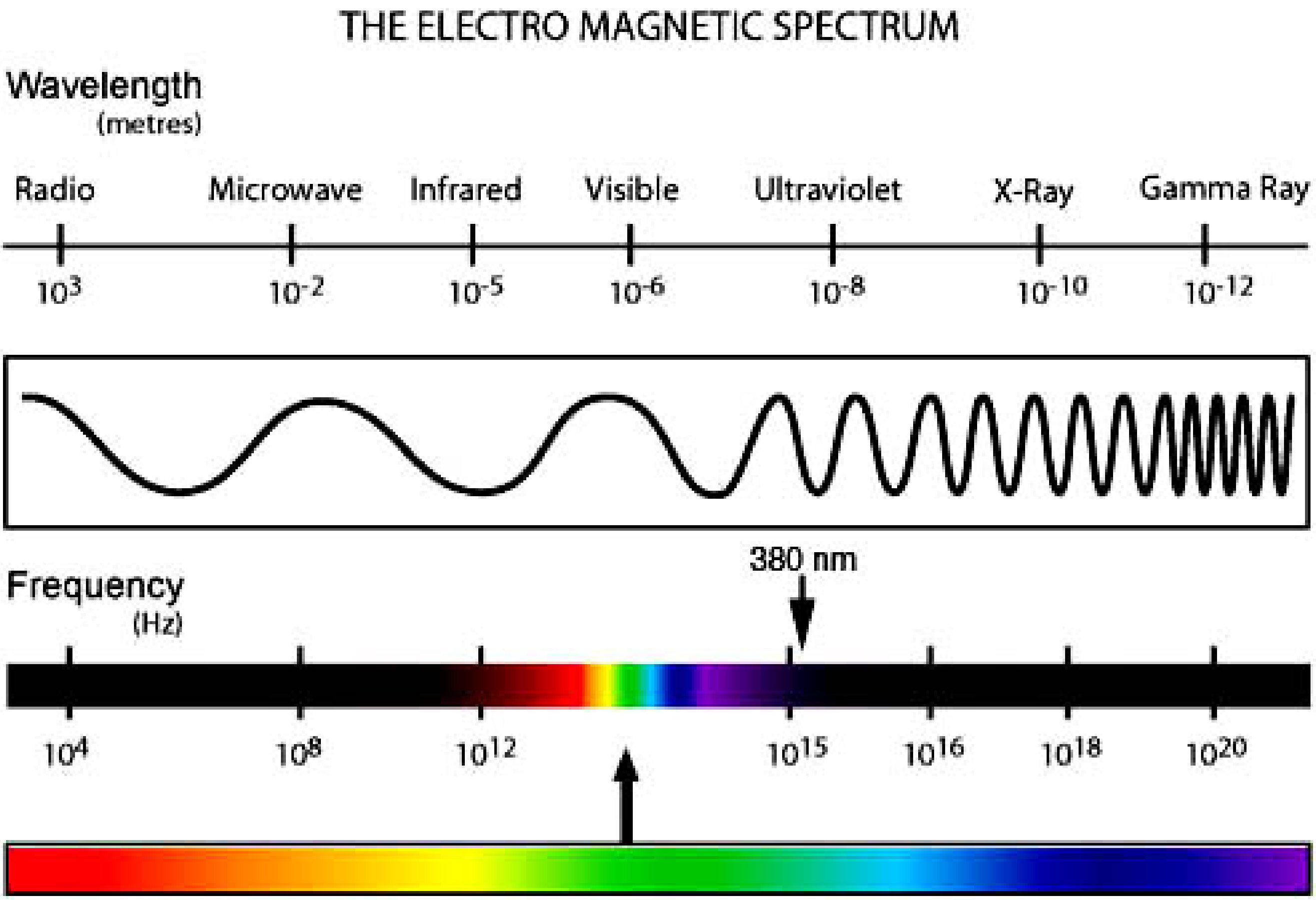

THE ELECTRO MAGNETIC SPECTRUM
Wavelength
(metres)
Radio
Microwave
Infrared
Visible
Ultraviolet
X-Ray
Gamma Ray
10^3
10^-2
10^-5
10^-6
10^-8
10^-10
10^-12
Frequency
(Hz)
380 nm
10^4
10^8
10^12
10^15
10^16
10^18
10^20

Image: All vibrations of energy are part of the electro-magnetic spectrum. These include electrical energy, heat, sound, light, radio waves and radioactive waves. Ultra-Violet light is merely a small portion of the spectrum of EM energy with a very short wavelength.

What Dr Popp discovered was that benzo[a]pyrene (the cancer producing molecule) absorbed the Ultra-Violet Light, then re-emitted it at a completely different frequency - it was a light "scrambler." The benzo[e]pyrene (harmless to humans), allowed the Ultra-Violet Light to pass through it unaltered.

Dr Popp was puzzled by this difference, and continued to experiment with UV light and other compounds. He performed his test on 37 different chemicals, some cancer-causing, some not. After a while, he was able to predict which substances could cause cancer. **In every instance, the compounds that were carcinogenic took the Ultra-Violet Light, absorbed it and changed or scrambled the frequency.** There was another odd property of these compounds: each of the carcinogens reacted only to light at a specific frequency - 380 nm (nanometres) in the Ultra-Violet range.

Dr Popp kept wondering **why a cancer-causing substance would be a light scrambler.** He began reading the scientific literature specifically about human biological reactions, and came across information about a phenomenon called **"Photorepair."**

Photorepair

It is well known, from biological laboratory experiments, that if you blast a cell with Ultra-Violet Light, so that 99% of the cell, including its DNA, is destroyed, you can almost entirely repair the damage in a single day just by illuminating the cell with the same wavelength at a much weaker intensity.

To this day, scientists don't understand this phenomenon, **Photorepair, but no one disputes it. Dr Popp, also knew that patients with Xeroderma Pigmentosum (skin condition), eventually die of skin cancer because their photorepair system can't repair solar damage.**

He was also struck by the fact that photorepair works most efficiently at 380 nm - the same frequency that the cancer-causing compounds react to and scramble.

This was where Dr Popp made his logical leap. **If the carcinogens only react to this frequency, it must somehow be linked to photorepair.** If so, this would mean that **there must be some kind of light in the body responsible for photorepair.**

A compound must cause cancer because it permanently blocks this light and scrambles it, so photorepair can't work any more.

Light is an Electromagnetic Wave, with in-phase oscillating electric and magnetic fields perpendicular to the direction of light's propagation.

The shorter the wavelength, the more energetic the photon, but the more susceptible it is to changes in the speed of light through a medium. This was known in the aftermath of Maxwell's equations: by the mid-to-late 1800's.

Light Inside the Body

Dr Popp wrote on the subject:

"Photon storage in biological systems", Electromagnetic bio-information, 1979.

"Biophoton Emission", Cell biophysics, 1984.

"Electromagnetic bio-information", 1989.

"Recent advances in biophoton research and its applications", World scientific, 1992.

"Biophoton emission of the human body", Journal of Photochemistry and Photobiology B: Biology, 1997.

Dr Popp was approached by a student Bernhard Ruth, who asked Dr Popp to supervise his work for his doctoral dissertation.

Dr Popp told Ruth he was prepared to do so, if the student could **show that light was emanating from the human body.**

Ruth happened to be an excellent experimental physicist.

Within 2 years, Ruth had constructed a machine resembling a big X-Ray detector which used a photomultiplier to count light, photon by photon.

The machine had to be highly sensitive because it had to measure extremely weak emissions. In an old documentary film taken in the laboratory at the International Institute of Biophysics, Dr Popp opens a chamber about the size of a bread box. He places a fresh cutting from a plant and a wooden match in a plastic container inside the dark chamber and closed the light proof door. Immediately he switches on the photomultiplyer and the image shows up on a computer screen.

The match stick is black, while the green, glowing silhouette of the leaves is clearly visible.

"We now know, that man is essentially a being of light." *- Dr Fritz-Albert Popp, MD*

In 1976, they were ready for their first test with cucumber seedlings.

The photomultiplier showed that photons, or light waves, of a surprisingly high intensity were being emitted from the seedlings. In case the light had to do with an effect of photosynthesis, they decided that their next test, with potatoes, would be to grow the seedling plants in the dark. This time, when the seedlings were placed in the photomultiplier, they registered an even higher intensity of light.

What's more, the photons in the living systems they'd examined were more coherent than anything they'd ever seen. Dr Popp began thinking about light in nature. **Light was present in plants and was used during photosynthesis. When we eat plant foods, he thought, it must be that we take up the photons, and store them. When we consume cabbage, for example, and digest it, it is metabolised into carbon dioxide (CO2) and water, plus the light stored from the sun and photosynthesis.** We extract the CO2 and eliminate the water, but the **light, an Electric Magnetic Wave**, must be stored. When taken in by the body, the energy of these photons dissipates and becomes distributed over the entire spectrum of EM frequencies, from the lowest to the highest.

This Energy is the Driving Force for All the Molecules in our Body. Before any chemical reaction can occur, at least one electron must be activated by a photon with a certain wavelength and enough energy. The biochemist and Nobel Prize winner Lehninger mentions in his textbook that some reactions in the living cell happen quite a lot faster than what corresponds to 37C temperature.

The explanation seems to be that the body purposely directs chemical reactions by means of electromagnetic vibrations (biophotons).

Photons (Light) Control Everything in the Cell

Photons switch on the body's processes like an orchestra conductor bringing each individual instrument into the collective sound.

At Different Frequencies, they Perform Different Functions. Dr Popp found that molecules in the cells responded to certain frequencies, and that a range of vibrations from the photons caused a variety of frequencies in other molecules of the body. This was supported by Dr Veljko Veljkovic, head of the Center for Multidisciplinary Research and Engineering, Institute of Nuclear Sciences Vinca, Serbia. She dared to ask the question that has forever puzzled cellular biologists: What is it that enabled the tens of thousands of different kinds of molecules in the organism to recognize their specific targets? Living processes depend on selective interactions between particular molecules, and that is true for basic metabolism to the subtlest nuances of emotion. It's like trying to find a friend in a very big very crowded ballroom in the dark. The conventional picture of a cell even now is that of a bag of molecules dissolved in water. And through bumping into one another by chance - random collisions - those molecules that have complementary shapes lock onto to each other so the appropriate biochemical reactions can take place.

This "lock and key" model has been refined to a more flexible (and realistic) "induced fit" hypothesis that allows each molecule to change shape slightly to fit the other better after they get in touch, but the main idea remains the same. It is supposed to explain how enzymes can recognize their respective substrates, how antibodies in the immune system can grab onto specific foreign invaders and disarm them. By extension, that's how proteins can "dock" with different partner proteins, or latch onto specific nucleic acids to control gene expression, or assemble into ribosomes for translating proteins, or other multi-molecular complexes that modify the genetic messages in various ways. But with thousands of reactions happening each second in just one cell this seems pushing the "mechanical" concept a bit too far. What has been proposed is that somehow each molecule sends out a unique electromagnetic field that can "sense" the field of the complimentary molecule. It's as if there is a "dance" in the cellular medium and the molecules move to the rhythm. The music is supplied by the biophoton.

Proteins and Nucleic Acids Singing to One Another?

"Veljkovic and Cosic proposed that molecular interactions are electrical in nature, and they take place over distances that are large compared with the size of molecules. Cosic later introduced the idea of **dynamic electromagnetic field interactions, that molecules recognize their particular targets and vice versa by electromagnetic resonance.** In other words, **the molecules send out specific frequencies of electromagnetic waves which not only enable them to "see" and "hear" each other**, as both photon and phonon modes exist for electromagnetic waves, but also **to influence each other at a distance and become ineluctably drawn to each other if vibrating out of phase (in a complementary way).**" - in "The Real Bioinformatics Revolution: **Proteins and Nucleic Acids Singing to One Another?"**, Science in Society, 2 February 2007.

> ***"There are about 100,000 chemical reactions happening in every cell each second. The chemical reaction can only happen if the molecule which is reacting is excited by a photon... Once the photon has excited a reaction it returns to the field and is available for more reactions... We are swimming in an ocean of light."*** *- in "Tensegrity No.12: The Quantum Cell Membrane", 14 December 2014.*

These "biophoton emission", provided an ideal communication system for the transfer of information to many cells across the organism. But the single most important question remained: **Where was the Light coming from?**

Cells "Talk" to Each-Other

When you get a cut or scratch on your skin, the cells that are injured; signal the surrounding healthy cells to begin reproducing copies of themselves to fill in and mend the opening. When the skin is back to normal, a signal is sent to the cells to tell them to stop reproducing. Scientists have wondered exactly how this works.

With biophoton emissions, this phenomenon of coordination and communication can only occur in a **Holistic System, with one central orchestrator. Dr Popp showed in his experiments that these weak light emissions were sufficient to orchestrate the body's repairs.**

The emissions had to be low intensity because these communications took place on a very small, intracellular, quantum level. Higher intensities would have an effect only in the world of the large and would create too much "noise" to be effective. **The number of photons emitted seemed to be linked to the organism's position on the evolutionary scale, the more complex the organism, the fewer photons were emitted.**

Rudimentary Animals and Plants tended to emit 100 photons/cm2/sec at a wavelength of 200-800 nm, corresponding to a very-high-frequency EM wave well within the visible range, whereas **Humans emit only 10 photons/cm2/sec at the same frequency.**

In one series of studies, Dr Popp had one of his assistants sit in the room every day for 9 months while he took photon readings of a small area of her hand and forehead.

Dr Popp analysed the data and discovered, that the **Light Emissions followed certain set patterns; Biological Rhythms at 7, 14, 32, 80 and 270 days, and similarities were also noted by Day or Night, by week and by month, as though the body were following the world's biorhythms as well as its own.**

Cancer Is a Loss of Coherent Light

Dr Popp tried out his machine on a series of Cancer patients.

In every instance, these patients had lost Those Natural Periodic Rhythms as well as their coherence. The lines of internal communication were scrambled.

They had lost their connection with the world. In effect, their light was going out. Just the opposite is seen with Multiple Sclerosis.

Dr Popp also examined the effects of stress.

In a stressed state, the rate of biophoton emissions goes up; a defence mechanism designed to restore the patient's equilibrium.

Dr Popp recognised that what he'd been experimenting with was even more than a cure for Cancer or Gestaltbildung.

(Gestalt Formation refers to how the human mind naturally perceives unified, whole patterns or configurations rather than individual, isolated parts).

Here was a model which provided a better explanation than the current neo-Darwinist theory for how all living things evolve on the planet.

"Good Vibes" Means: Coherent Light

Dr Popp came to realise that:

Light in the Body might even Hold The Key to Health and Illness.

In one experiment, he compared the light from free-range hens eggs with that from penned-in, caged hens.

The photons in the former were far more coherent than those in the latter.

Dr Popp went on to use biophoton emissions as a tool for measuring the quality of food.

The Healthiest Food had the Lowest and most Coherent Intensity of Light.

Any disturbance in the system increased the production of photons.

Health was a State of Perfect Subatomic Communication.

Ill Health was a State of Communication Breakdown.

We are ill when our waves are out of synch.

Biophoton emission detection is currently used commercially in the food industry. Agricultural science is looking at Bio-photon emissions to determine plant health for the purposes of food quality control.

[Biophotons (from Bio "life" and Photons "light"): Are Photons of Light in the Ultraviolet, and Visible Light range that are produced by a biological system. They are non-thermal in origin, and the emission of biophotons is technically a type of bioluminescence.

Biophoton Emission (Ultraweak Photon Emission): Is the spontaneous release of extremely faint light from living organisms.]

The Far Reaching Effects of Dr Popp Discovery

In the 1970's Dr Veljko Veljkovic, who now heads the Center for Multidisciplinary Research and Engineering, Institute of Nuclear Sciences Vinca, Serbia, also discovered **a method for predicting which of the hundreds of new chemicals made by the rapidly expanding chemical industry were Carcinogenic, by calculating certain electronic, biophotonic properties of the molecules.**

This method was soon found equally applicable to predicting organic chemicals that were Mutagenic, or Toxic, and even those that were Antibiotic, or Cytostatic (Anticancer).

Biophoton Therapy

Biophoton Therapy is the Application of Light to particular areas of the skin for Healing Purposes. The light, or photons, that are emitted by these units are absorbed by the skin's photoreceptors and then travel through the body's nervous system to the brain, where they help regulate what is referred to as our human bio-energy. By stimulating certain areas of the body with specific quantities of light, biophoton therapy can help reduce pain as well as aid in various healing processes throughout the body.

The theory behind Biophoton Therapy is based on the work of Dr Franz Morell and has been expanded by the work of Dr L.C. Vincent, and Dr **Fritz-Albert Popp** researcher in Biophysics, particularly in the study of Biophotons; made the first extensive physical analysis of biophotons; which were discovered in 1922), **theorized that light can affect the electromagnetic oscillation, or waves of the body and regulate enzyme activity.**

Scientists around the globe began **to consider that the body's communication system might be a complex network of resonance and frequency.**

Dr Popp and his colleagues went on to study the light emissions from several organisms of the same species, first in an experiment with a type of water flea of the genus Daphnia. Tests with a photomultiplier **showed that the water fleas were sucking up the light emitted from each other. Dr Popp tried the same experiment on small fish, and got the same result. According to his photomultiplier, sunflowers were like biological vacuum cleaners, moving in the direction of the most solar photons to hoover them up. Even bacteria swallowed photons from the media they were put in.**

Communication Between Organisms

These emissions have a purpose outside of the body. Wave resonance isn’t only being used to communicate inside the body, but between living things as well. Two healthy beings engaged in “photon sucking”, by exchanging photons.

Dr Popp realised that **this exchange might unlock the secret of some of the animal kingdom's most persistent conundrums: how schools of fish or flocks of birds create perfect and instantaneous coordination.**

Many experiments on the homing ability of animals demonstrate that it has nothing to do with following habitual trails, scents or even the EM fields of the earth, but rather some form of silent communication that acts like an invisible rubber band, even when the animals are separated by miles of distance.

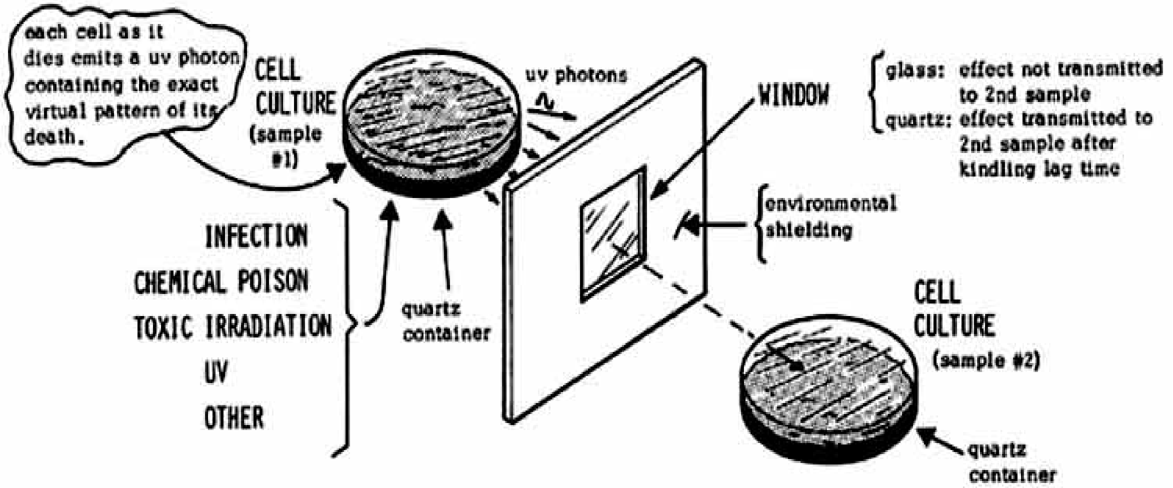
For humans, there was another possibility.

If we could take in the photons of other living things, we might also be able to use the information from them to correct our own light if it went awry.

Death Transmission via the Paranormal "Light" Channel

Some extremely interesting experiments were performed by V. P. Kaznacheev regarding **the paranormal transmission of death by light inter-organism communication.**

Kaznacheev, was a prominent Russian academician, hypothesized that cells transmit "death signals" and biochemical states to adjacent cells via ultraweak electromagnetic emissions (biophotons)**. His research into this phenomenon, termed the "mirror cytopathic effect", explored the non-contact transfer of viral pathology and cellular decay through optical boundaries like quartz glass**


each cell as it dies emits a uv photon containing the exact virtual pattern of its death.
CELL CULTURE (sample #1)
uv photons
WINDOW
glass: effect not transmitted to 2nd sample
quartz: effect transmitted to 2nd sample after kindling lag time
environmental shielding
INFECTION
CHEMICAL POISON
TOXIC IRRADIATION
UV
OTHER
quartz container
CELL CULTURE (sample #2)
quartz container

"Two groups of cells were selected from the same cell culture and one sample placed on each side of a window joining two environmentally shielded rooms. The cell cultures were in quartz containers. One cell culture was used as the initiation sample and was subjected to a deadly mechanism; germ, chemical poison, irradiation, ultraviolet rays, etc. The second cell culture was observed, to ascertain any transmitted effects from the culture sample being killed. ***When the window was made of ordinary glass, the second sample remained alive and healthy. When the window was made of quartz, the second sample sickened and died with the same symptoms as the primary sample.*** *The experiments were done in darkness, and over 5,000 were reported by Kaznacheyev and his colleagues. The onset of induced complementary sickness and death in the second culture followed a reasonable time, say 2 to 4 hours, behind sickness and death in the primary culture.* ***The major transmission difference between window Glass and Quartz, is that Quartz transmits both Ultraviolet and Infrared well, while Glass is relatively opaque to Ultraviolet and Infrared.*** *Both quartz and glass transmit visible light. Thus glass is a suppressor of the paranormal channel, while quartz is not. In 1950, Western researchers found that* ***cells could be killed in darkness with ultraviolet radiation, kept shielded from visible light for 24 hours or longer, and then if radiated with visible light the cells would start reviving by hundreds of thousands even though they had been clinically dead.*** *Specifically, every* ***cell emits mitogenetic radiation in the Ultraviolet range***

twice: when it is born and when it dies. The Ultraviolet Photon emitted at death contains the exact virtual state pattern of the condition of the cell at death. The healthy cells are bombarded with death messages from those that are dying, and this diffuses the death pattern throughout the healthy culture, eventually kindling into the same death pattern there." *- V.P. Kaznacheev, in "Distant Intercellular Interactions in a System of Two Tissue Cultures", Psychoenergetic Systems, March 1976.*

> ***"Various biological effects can be explained by unequal absorption of microwave energy by different tissues of the body, as well as by an excitation of some parts of a nervous system. This method is new and apparently powerful enough to estimate this absorption of electromagnetic energy from both qualitative and quantitative sides. Indeed, if the absorption of electromagnetic energy takes place in nerves and nerve cells, a negligible portion of the energy absorbed by the nerve is enough to produce a number of secondary phenomena in the body caused by the excitation of a nerve.*** *It is essential that such secondary processes occur due to a comparatively high internal energy of the body (for example, due to the energy of tissues, which are innervated by the 'modified' nerve in our experiments), but not due to a relatively insignificant absorbed external energy by the nerve. Thus,* ***all parts of the electromagnetic spectrum contains some bands, which act differently on biological objects, in particular, on the nervous system of a living organism. The search for radiation emitted by organisms represents the second way of finding biologically active waves and of clarifying the issues of absorption of the electromagnetic field. If the experiment confirms the existence of an active emitting of electromagnetic waves by a living organism, it is necessary to clarify the biological significance of it, since it is no matter how small is its intensity, it can be one of the strongest factors in the daily life of living organisms".*** *- S. Ja. Turlygin. in "Izluchenie mikrovoln (λ□2mm) organizmom cheloveka", Bulletin of Experimental Biology and Medicine, 1942.*

Dr Popp had begun experimenting with the idea: **If cancer-causing chemicals could alter the body's biophoton emissions, then it might be that other substances could reintroduce better communication. Dr Popp wondered whether certain plant extracts could change the character of the biophoton emissions from cancer cells to make them communicate again with the rest of the body. He began experimenting with a number of non-toxic substances purported to be successful in treating cancer.** In all but one instance, these substances only increased the photons from tumour cells, making them even more deadly to the body. **The single success story was Mistletoe, which appeared to help the body to "resocialise" the photon emissions of tumour cells back to normal.** In 1 of numerous cases, Dr Popp came across a woman in her 30's who had **Breast Cancer, and Vaginal Cancer. Popp found a Mistletoe remedy that**

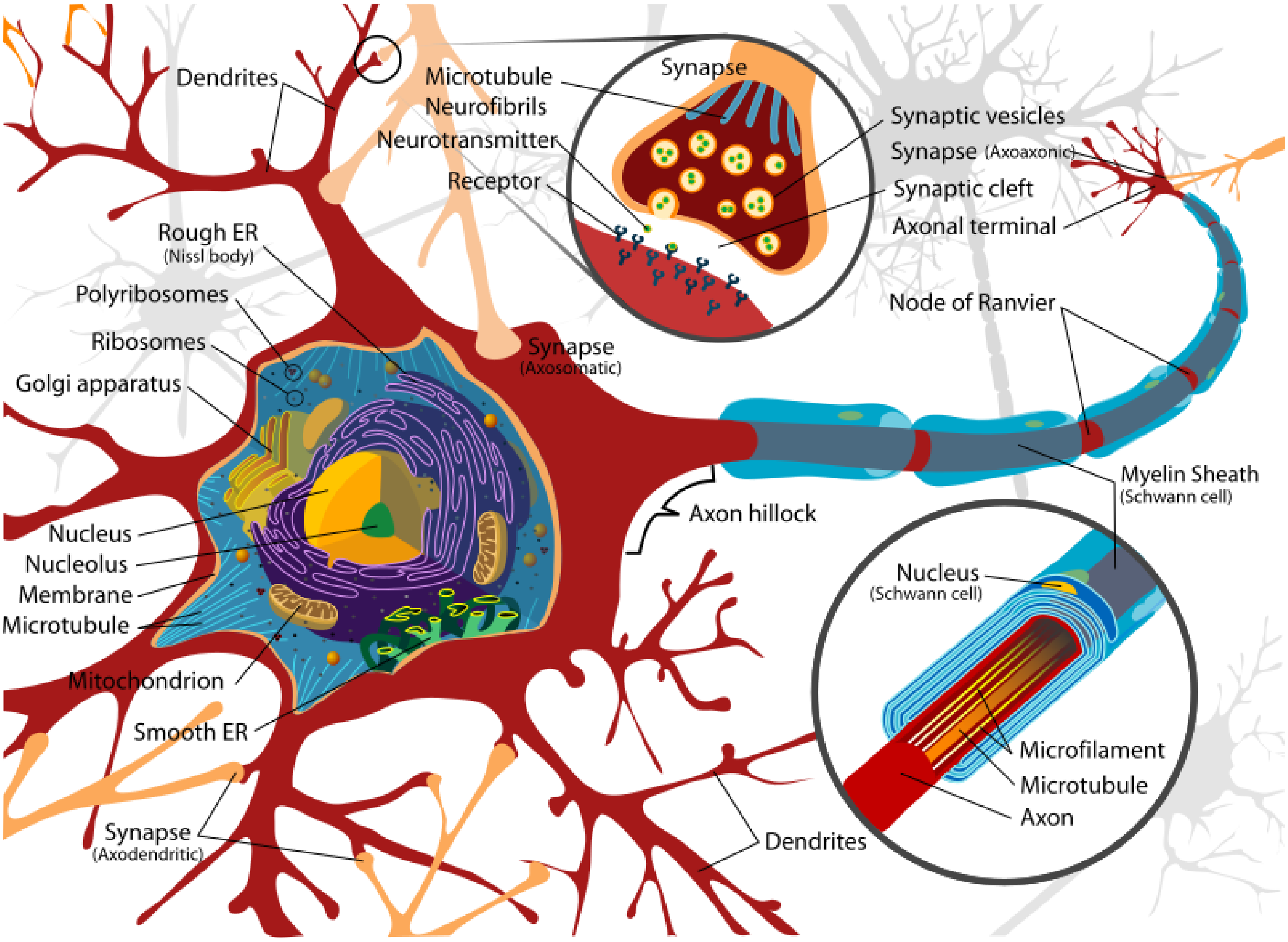
created coherence in her cancer tissue samples. The woman stopped any treatment other than the **Mistletoe extract and, after 1 year, all her laboratory tests were virtually back to normal.** For Dr Popp, MD, **Homoeopathy was another example of photon sucking.** He had begun to **think of it as a "resonance absorber".** Homoeopathy rests upon the notion that **like is treated with like. A plant extract that at full strength can cause hives in the body is used in an extremely diluted form to get rid of it.** If a rogue frequency in the body can produce certain symptoms, it follows that a high dilution of a substance which can produce the same symptoms would also carry that frequency. Like a resonating tuning fork, a suitable Homoeopathic solution might attract and then absorb the abnormal oscillations, allowing the body to return to normal health. According to Dr Popp, the Body Meridian System transmits specific energy waves to specific zones of the body. Orthopaedic surgeon Dr Robert Becker, who has done a great deal of research on EM fields in the body, designed a special electrode recording device that rolls along the body. His many studies have shown **electrical charges on every one of the people tested corresponding to meridian points** ["The Field: The Quest for the Secret Force of the Universe", 2001].

Light in Human Consciousness

In a ground-breaking paper "Orchestrated Objective Reduction of Quantum Coherence in Brain Microtubules: The "Orch OR" Model for Consciousness", Mathematics and Computers in Simulation, April 1996, the **Brain is described as a quantum computer whose main architecture are the cytoskeletal microtubules and other structures within each of the brain's neurons.** If you examine a neuron, you will see that there are many hollow tubes surrounding the axon. These microtubules have been thought of as a kind of scaffold to support the Nerve Fibre. The particular characteristics of microtubules that make them suitable for quantum effects include their **Crystal-Like lattice structure, hollow inner core, organisation of cell function, and capacity for information processing.** According to the researchers, **their size appears perfectly designed to transmit Photons in the Ultraviolet range.**

> ***"Approaches to understanding consciousness which are based on known and experimentally observed neuroscience fail to explain certain critical aspects. These include a unitary sense of binding, non-computational aspects of conscious thinking, difference and transition between pre-conscious and conscious processing, (apparent) non-deterministic free will and the essential nature of our experience. We conclude that aspects of quantum theory (quantum coherence) and of a newly proposed physical phenomenon of wave function self-collapse (Objective Reduction, OR) offer possible solutions to each of these problematic features. We further conclude that cytoskeletal microtubules, which regulate intra-neuronal activities and have cylindrical paracrystalline structure, are the best candidates for sites of quantum action and OR,***

***and of "orchestrated OR" (Oreh OR)."** - in "Orchestrated Objective Reduction of Quantum Coherence in Brain Microtubules: The "Orch OR" Model for Consciousness", Mathematics and Computers in Simulation, April 1996.*


Dendrites
Microtubule
Neurofibrils
Neurotransmitter
Receptor
Synapse
Synaptic vesicles
Synapse (Axoaxonic)
Synaptic cleft
Axonal terminal
Rough ER
(Nissl body)
Polyribosomes
Ribosomes
Golgi apparatus
Synapse
(Axosomatic)
Node of Ranvier
Myelin Sheath
(Schwann cell)
Axon hillock
Nucleus
Nucleolus
Membrane
Microtubule
Nucleus
(Schwann cell)
Mitochondrion
Smooth ER
Microfilament
Microtubule
Axon
Synapse
(Axodendritic)
Dendrites

Schematic of central region of neuron, showing parallel arrayed microtubules interconnected by Microtubule-Associated Proteins. Microtubules in axons are lengthy and continuous, whereas in dendrites they are interrupted and of mixed polarity. Linking proteins connect microtubules to membrane proteins including receptors on dendritic spines.

*"Traditionally viewed as the cell's "bone-like" scaffolding, microtubules and other cytoskeletal structures now appear to fill communicative and information processing roles. Theoretical models suggest **how conformational states of tubulins within microtubule lattices can interact with neighbouring tubulins to represent, propagate and process information as in molecular-level "cellular automata" computing systems."** - Hameroff, 1982; Rasmussen, 1990; Hameroff, 1992.*

In their paper (April 1996), Hameroff and Penrose present a model L**inking Microtubules to Consciousness** using quantum theory. In their model: **Quantum Eoherence emerges, and is isolated in brain microtubules** until a threshold related to quantum gravity is reached. The resultant self-collapse creates an instantaneous "now" event. **Sequences of such events create a flow of time, and consciousness. Internal Photons (Inner Light), Is Very Real, and Is The Basis of virtually All Human Cellular and Systemic Function.**

The U.S. Food and Drug Administration (FDA), has created an arduous, costly, and detailed process for market entry for Therapies.

Several years and many millions of dollars are required to get a drug or device approved. Typically, the drug is created in a laboratory and later tested to confirm the medical benefit. **"Medicine" has thus followed the "Science."**

One often finds, however, that Alternative Therapies are More Successful than Medical Trade procedures. Here, Light Therapy has first been shown effective, but to be approved for general use, time-consuming, expensive and exhaustive laboratory-based studies must be undertaken **to provide the "scientific proof".** It is also important to note that the Foundation is now working with Expanded Spectrum Photo Therapy (ESPT) and Low Level Light Therapy (LLLT), which have further implications regarding Photo Dynamic Therapy for Cancers and non-drug treatment for pain." - "The Foundation for Light Therapy", Charitable, Non-Profit Scientific and Humanitarian Organization 501(C)(3), USA., 2000-2015.

Healing Photons

"Blood Irradiation Therapy belongs to those ideas, that run contrary to currently accepted practice and hence often arouse bafflement, misunderstanding, consternation, and rejection. Thus is should not surprise us that no mention of Blood Irradiation Therapy is to be found in Standard Textbooks. A long-overdue **acceptance of Blood Irradiation Therapy could have a Major Impact on the Earning Prospects of Giant Corporations.** Therefore it is important to note that the history of Blood Irradiation Therapy is not merely the story of one more wonder drug. **It recounts the fledgling steps toward a shift.**

Many Specialists in the Treatment of Disorders:

1. **Chronic Hepatitis.**
2. **Necrotizing Pancreatitis.**
3. **Bronchial Asthma.**
4. **Pelvic Inflammatory Disease.**

Are unaware that Ultraviolet Blood Irradiation Therapy was used with superior effectiveness and safety 50 years ago to treat these conditions Photobiology; The Science of the Interaction of Light and Living Cells or creatures, is a Dynamic, Important Area of Biophysics.

Certain parts of it such as the organisation of the spectrum are quite straightforward and well-known, other parts, including the Potentially Therapeutic Responses of Cells To Incoming Light, are complex, and little understood.

1. Blood Irradiation Therapy offers a curious example of a scientific advance that was largely ignored, even though it offered an excellent solution to serious, pressing problems.

2. There are no serious critics of Blood Irradiation Therapy, and there never have been any.

3. Repeated studies have shown that Blood Irradiation Therapy operates by a physiological mechanism that goes will beyond any placebo effect.

4. Blood Irradiation Therapy offers insight into many aspects of Photobiology. It can help elucidate the mechanisms of the body's energy metabolism. And its patterns of action can aid us in understanding related therapies as well.

5. Blood Irradiation Therapy is highly effective, safe, and versatile. It has been exhaustively studied, and its mechanisms of action are well characterized. **Blood Irradiation Therapy has been successfully used on millions of patients in a number of countries, and in various difficult indications for which there is no other effective treatment.**

All of this: Augurs a bright future for this most efficacious therapy; The Therapy of the Healing Photons." - in "Healing Photons", 1998.

The Place of Diet and Ultraviolet Blood Irradiation Therapy in the Treatment of Cancer

"- Dr Miley: I wish to congratulate you, Senator Pepper, on the bill (S. 1875).

It is a wonderful thing, and I endorse it wholeheartedly. **All of us are here for the same purpose, regardless of how we approach the subject of cancer, and what our ideas are. In the way that good can be done for people.**

Diet Influences Cancer

I feel that the Gerson Dietary Regime Offers a new approach to the Cancer Problem. We do Know Experimentally that Diet Definitely Does Influence Cancer. There Is a Lot of Experimental work done, to substantiate that.

Dr Miley Statement, Together With the Signed Statements of Distinguished Physicians:

Dr George Miley - I graduated from Northwestern Medical School in 1932, University of Vienna Postgraduate Medical School, 1933-34, I visited the hospitals in India, China, and Japan.

Practiced Medicine and Surgery in Iowa, until January 1937.

I received Doctor of Medical Science from Hahnemann Medical College and Hospital of Philadelphia in 1941, for original Research in Ultraviolet Blood Irradiation Therapy. I have been in Medical Research, as Clinical Professor of Pharmacology, and Director of the Blood Irradiation Clinic.

I am a fellow of the American Medical Association, and American Association for the Advancement of Science. **Since August 1945, I am Medical Director of the Gotham Hospital, New York, in charge of Blood Irradiation Research,** and the representative of Dr Stanley Reimann, head of oncology (science of tumors), and pathology (science of abnormal anatomy)**, to observe and control as necessary, the experimental work of Dr Max Gerson in the study of the Clinical Effects of Diet on Cancer Patients** at the Gotham Hospital. During my research in the field of **Ultraviolet Blood Irradiation Therapy,** which experience includes the administration and use of the method over 8,000 times in more than 3,000 individuals, **many important clinical observations were made which were substantiated by other workers in the same field.**

Clinical Observations which have to do with the Cancer Problems:

1. Acute Pyogenic (pus forming) infections in, and around the Cancerous Area can be controlled better by Blood Irradiation Therapy than by any other known method.

2. The Acute Toxic Symptoms often present in cancer patients can best be controlled by Ultraviolet Blood Irradiation Therapy, which Is The Best Detoxicating Agent Known to modern medicine, according to the workers in this field. The Gerson Dietary Regime consists of low animal protein, plus frequent injections of crude liver extracts and the oral administration of adequate amounts of minerals and vitamins to supplement those vitamins missing in the diet. The Diet consists chiefly of large amounts of fresh fruit, fresh vegetables and no meat, alcohol, canned or bottled foods.

The Diet Burns Down to an Alkaline Ash, and in general, is a combination of many well-known and approved Dietary Nutritional Discoveries by many other workers.

The Closer one's Diet is to Nature and the Soil, with Fresh Fruit from the Trees, and Fresh Vegetables directly from the garden, the nearer one is to normal health.

Primary Biochemical investigations by Dr Rudolph Keller, indicate that the use of the Diet is Soon Followed by certain definite Electrochemical Changes; notably, shifts toward normal of markedly unbalanced sodium, potassium, and phosphorous ratios in the blood serum and the body tissues.

Dr Keller, as a result of his **investigation of the Diet,** believes that this type of E**lectrochemical Reaction, can very well Change the Entire Metabolism of the Body in Cancer Patients.**

A preliminary paper by Dr Gerson describes the diet in detail and cites 10 cases of cancer in which it appeared that the Gerson Dietary Regime; Favourably Influenced the Course, and Symptoms of the Disease.

This New Approach to the Cancer Problem Is Of Fundamental Importance, because it is the first promising method which treats cancer as a systemic disease; that is, a disease of abnormal chemistry of the whole body.

Heretofore, all efforts to treat cancer have been based upon the theory that eradication of the cancer growth must be performed by:

1. **Surgery.**
2. **X-Ray.**
3. **Radium.**

Without Regard for Abnormal Body Chemistry, Which Permits The Growth To Occur.

The reason that surgery, X-Ray, and Radium Have Not Been a real success in the Treatment of Cancer, is that Cancer Is Primarily a Disease of Abnormal Body Chemistry, Chemistry Which Is Controlled by Organs Far Distant From The Site Of The Cancer. The Gerson Dietary Regime Is An Encouraging Attempt To Return; such abnormal body Chemistry To Normal. I first met Dr Gerson in 1942, at which time **I was interested in the effects of the Gerson Diet on Tuberculosis.**

I visited his office in New York City, with Dr Charles Bailey, outstanding Philadelphia and New York Chest Surgeon, and **observed Several Tuberculosis Patients, who had made Remarkable Recoveries Following the Use of the Gerson Diet.** During this visit; **Dr Gerson mentioned the potential use of the Gerson Diet in Cancer.**

In the last 4 years I have found Dr Max Gerson to be an honest and ethical practitioner of medicine, interested in bettering modern methods of treatment, as the result of many years of clinical study of the effects of diet on various disease processes. **Since January 1946, we have, at the Gotham Hospital, extended hospital facilities, including a special Diet Kitchen to Dr Gerson, for a controlled study and observation of his work by physicians.**

The Results Are Most Encouraging.

There are certain definite problems to be overcome before any type of treatment of cancer can be considered partially or wholly successful.

Problems Which Are Not Solved By:

1. **Surgery.**
2. **Radium.**
3. **X-Ray.**

Those That Received No Medical Treatment Lived Longer

A Survey made by Dr Stanley Reimann of Cancer cases in Pennsylvania over a long period of time; Showed that:

Those Who Received No Treatment Lived Longer Than Those That Received Surgery, Radium, or X-Ray.

The exceptions were those patients who had received Electrosurgery, and lived approximately as long as those who received No Treatment Whatsoever.

The Survey also showed that following the use of Radium and X-ray, Much More Harm Than Good Was Done to the average cancer patient.

NONE of the routine measures employed [by the Medical Trade] to combat cancer are as effective as their proponents would have us believe.

These problems and new approaches to their solution:

1. The abolition of pain has been possible only by The Use of Narcotics, Which Are Deleterious to Any Patient's General Health when administered over a long period of time. This problem, has been solved more by the Gerson Diet than by any other method. We Have Observed Marked Relief of Pain in 90% of the patients who entered the Hospital, with Severe Types of Pain due to Cancer.

2. Further Spread of Cancer processes have been Retarded by the Use of the Gerson Dietary Regime in Several Cases observed.

3. Reduction in the Size of the original Malignant growth Has Been Observed to occur in certain instances following the use of the Gerson Diet.

4. Secondarily Disseminated Cancers from the original growth Has Not Been Observed, in the Gotham Hospital series. Patients seen in Dr Gerson's office, there was an apparent Disappearance of Metastatic nodules.

5. Control of Acute Pyogenic Infections (Pus Forming), in areas eroded by cancer, the Chief Cause of Death in a Cancer Patient. The Only Type of Treatment (in my experience), that Has Been of Any Use in the Control of this Type of Infection is Ultraviolet Blood Irradiation Therapy, though only offering a temporary relief of 3 to 4 weeks' duration, is of Extreme Importance to the welfare of the individual patient, especially where the patient's general health must be raised to a level high enough To Allow the institution of Other Treatment such as the Gerson Dietary Regime.

6. Acute Toxic Symptoms, such as Nausea and Vomiting, which is commonly observed in a considerable number of cancer patients May Be Temporarily Alleviated by Ultraviolet Blood Irradiation Therapy. This result, though often only temporary, Allows the Institution of Other Therapy which otherwise might not have been possible and as such has a limited but definite value in the treatment of a cancer patient.

7. Hemorrhage due to erosion by cancer masses; is a frequent cause of death. Its control Is Only Possible, if there is no spread from an original cancer or there is a reduction in the original tumor or its metastases. To date; the Gerson Diet Is Of Value in the Control of Hemorrhage, only to the extent to which it limits directly the encroachment of cancer masses upon important blood vessels.

8. General Debility (and especially loss of weight), have been frequently Overcome by both the Gerson Dietary Regime, and Ultraviolet Blood Irradiation Therapy, which may be used together without any contraindications whatsoever. As a result many formerly debilitated patients were able to do normal work again.

9. The Maintenance of the Morale of the cancer patient; Is of Primary Importance At All Times. When any one, or any combination of the previous 8 problems are solved for the individual cancer patient, his morale is enormously improved so that the practical solution of one or more of these problems must be accomplished wherever possible regardless of whether the patient is considered a hopeless case of cancer or not.

Next, we must consider the problems to be overcome in the prevention of cancer: The discovery of the various causes of the various types of cancer.

From clinical observations on cancer patients, the Gerson Dietary Regime provides a most promising lead.

In order to profit from this knowledge an enormous amount of collateral biochemistry must be carried out intensively, on both cancer patients and cancer animals by competent workers who are equipped with science's most up-to-date tools for such work.

There are many great institutions doing this work. Prominent among them are the Lankenau Research Institute of Philadelphia, the National Health Institute of Bethesda, Md., Rockefeller Institute, and many others.

There are no special cancer hospitals, as yet doing this highly specialized work in biology and biochemistry to any appreciable degree though they should be encouraged to do this fundamental work in close relation to their carrying out the **Not Too Successful Routine Treatment of Cancer by: Surgery, Radium, and X-Ray.**

Recently a medical research foundation has been organized which recognizes the value of the 2 new avenues of approach to cancer (**Gerson Dietary Regime, and Ultraviolet Blood Irradiation Therapy**), and is now in the final stages of legalization. **Such work often has been considered unimportant** or unorthodox by existing avenues of research that **have remained closed to many worthwhile scientific workers.**

The foundation will be devoted to the correction of the deficiency which allows, in our present American research practice, **this delay of action in making known and clinically applicable important basic discoveries.**

In the very near future it is proposed to set up within the structure of the Foundation, an Institute of Dietetics, devoted to the careful correlation of all Biochemical Knowledge pertaining to the Influences of the Diet on Cancerous Growth and its various detrimental effects; at the Foundation's Institute of Dietetics, this knowledge of its practical application will be taught to those dietetians, nurses, technicals, physicians and other cancer research workers who are interested in its approach to solving the problem of the Cure and Prevention of Cancer. Such a foundation also insures both the hospital, and the laboratory facilities which are so essential for the testing of new treatments which may conceivably influence favourably the course and symptoms of cancer.

In such an environment a carefully controlled evaluation of promising methods of treatment of human cancer would be made available.

The History of Medicine is Filled with Tragic Errors, which allow such a long time to elapse between the time of discovery of a basic principle and the actual medical application of the discovery for the good of mankind.

> ***"Nowhere today is this delay more unhappily evident than in the field of cancer research.***
> ***The Accumulated Clinical Research Data of : Rous, Shope, Coley, Bittner, Strong, Andervont, Green, Greene, Williams, Taylor, Furth, Twombly, Cowdry, Diller, Bawden, Pirie, Stanley, Wycoff, Kunitz, and Others;***
> ***Indicate Beyond Peradventure The Path for getting at Something of Practical Benefit to the Cancer Patient of the future, Other Than Surgery, and Radium."*** *- Dr Hammett, in "Science, Vol. 103 , No. 2685, p. 714.*

Even the newly announced Radioactive Phosphorous Cure of skin cancer, and skin cancer only does not approach the deeper body cancer problem from a systemic or fundamental point of view.

It Is Obvious that the Many Potentialities Inherent in the Gerson Dietary Regime for cancer patients should be explored, and exploited to the Fullest Extent for the Common Good.

In order that this new and highly encouraging approach to the problem of cancer cure, and prevention be utilized on a statistically significant scale by both laboratory and clinical workers alike, sufficient funds must be made available for this work. This Also Holds True for the Use of Ultraviolet Blood Irradiation Therapy, in Controlling Secondary Infections, and certain Toxic Symptoms in Cancer Patients.

These Observations Have Become Apparent to Several Distinguished Physicians who have Witnessed the Effects of the Gerson Diet on Cancer patients, and whose Signed Statements are also herewith enclosed.

In View of the Success so far, and the excellent future promise of both the Gerson Dietary Regime and Ultraviolet Blood Irradiation Therapy, it would be unthinkable not to give major consideration to these new avenues of approach to the cancer problem in the research program contemplated by bill S. 1875." - Dr George Miley, MD, Medical Director, Gotham Hospital, New York , N.Y., 29 June 1946, in "Cancer Research: Hearings Before a Subcommittee of the Committee on Foreign Relations, United States Senate, 79th Congress, 2nd Session, on S. 1875, Bill to Authorize and Request the President to Undertake to Mobilize at Some Convenient Place in the United States an Adequate Number of the World's Outstanding Experts, and Coordinate and Utilize Their Services in a Supreme Endeavor to Discover Means of Curing and Preventing Cancer, 1 to 3 July 1946.

Electrical Current Heals Chronic Wounds

"Chronic Wounds Treated With Very Low Electrical Currents: Heal More Quickly than they do with standard treatments, a new study suggests.

Researchers studying the ElectroRegenesis Therapy Device (ERTD), it Stimulates the Body's Natural Ability to Heal:

1. **Wounds.**
2. **Long-term Ulcers.**
3. **Diabetic Lesions.**
4. **Circulation Problems.**
5. **Paralysis.**
6. **Ageing.**

Several patients, some of whom had had wounds for 5 Years; Showed Significant Healing in just 1 or 2 Sessions.

The promising study, presented recently at the 8th International Congress American Academy of Anti-Aging Medicine, may spell painless relief for the estimated 2% of Americans living with wounds that don't heal.

> ***"What We do Understand; is that the Device seems to Act as:***
> ***1. Ultra-Powerful Antioxidant, that Knocks Out Infection.***
> ***2. Stimulates Blood Flow.***
> ***3. Encourages Cell Regeneration."*** *- Dr Alfred J. Koonin, MD, in Clinical Study Monitor for the ElectroRegenesis Therapy Device.*

And it also appears to help patients regardless of their age, says Dr Koonin, MD, Los Angeles. Chronic Wounds, are those that show no sign of healing in 4 weeks, or have not significantly healed in 8 weeks, says Kristin Winbigler, Director of the Wound Care Center at Stamford Hospital, Connecticut.

> ***"With Diabetics, there is a high glucose level in the tissue, that interferes with healing. When you bump into something, it would heal. For them, it's a bigger problem."*** *- Dr Kristin Winbigler, MD*

The study observed 25 wounds in patients ranging in age from 20 to 75.

For 23 minutes a day, they were wrapped in spongy, damp bandages above and below the wound. The researchers then wrapped Electrodes over the bandages and attached them to the device, which delivered a Low Electrical Current, Similar to that Present Naturally in the Body. After 23 minutes, wraps were applied to their feet and the treatment continued for 3 more hours.

Most of the patients received treatments 5 days a week for about 2 weeks. The average rate of healing was about three-quarters of a centimetre each day of treatment. Wounds that had not responded to conventional therapy, for months healed, within a few weeks, researchers found. Dr Koonin says The Therapy Kick Starts the Body's Natural Energy Source, Which Is Essential to Healing.

> ***"It takes an electrical system that's out of whack and sort of normalizes it."*** *- Dr Koonin, MD*

Dr Koonin says some of the Device effects are a little mystifying. While conventional therapies often require surgical or chemical removal of any dead tissue before treatment begins, Dead Tissue Seemed to Disappear After Treatment with the ElectroRegenesis Therapy Device.

> ***"It seemed to be reabsorbed by the body or converted to new tissue. It's difficult to tell which. My own feeling is it was probably reabsorbed into the body, but we don't know."*** *- Dr Koonin, MD*

A slight rash around the wound, was the only negative side effect noticed in some patients. But Dr Koonin says the treatments also seemed to have another positive side effect.

> ***"Many of them got a little brighter, particularly Older Patients, Paraplegics and Quadraplegics. Their appetites started to resume. It's the sort of thing you'd expect from an antioxidant. It sort of cleans up the tissue. They Felt Better."*** *- Dr Koonin, MD*

Dr Koonin believes the ElectroRegenesis Therapy Device (ERTD), will have many applications. Some animal testing on spinal cord injuries is being done, and trials are planned to test its effects on severe Facial Pain, Shingles and Poor Circulation. Dr Winbigler, says wound-care centers offer a wide range of therapies for people with chronic wounds. The incidence of Chronic Wounds and the demand for new Wound-Care products Are Expected to Increase in coming years. The market for new therapies in wound-care management is expected to grow from $455 Million in 1999 to $2.4 Billion in 2006, according to a report this month by industry research Frost & Sullivan." - in "Electrical Current Heals Chronic Wounds", HealthScout, 28 December 2004.

Wound Care Spending $300 Billion

> ***Global Wound Care spending estimated at $300 Billion Annually. 'The United States leads the way with over $148.65 Billion annually, followed by China $42.78 Billion, Germany $23.33 Billion, Japan $22.91 Billion, UK $10.1 Billion in 2019, per year and take up 50% of Community Nurse Time. Mean National Health Service cost of wound care over 12 months was £7,300 per wound, from £6,000 to £13,700 per healed and unhealed wound, respectively."*** *- in "Human Wound and Its Burden: Updated 2025 Compendium of Estimates", Advances in Wound Care, September 2025; NIH ; NHS.*

The Quantum Cell Membrane

"What is life?

Life begins where the environment first meets you: This happens on the surface of a cell's membrane. Life Begins by Creating Wireless Power Transmitters in our surface membranes that work by collecting magnetic resonance and induction from our environment. This is how life becomes super charged. Sunlight, like sound, creates vibration in atoms in the air and in cell membranes and is fully able to transfer energy and information of these oscillations. This makes your skin and cell membranes a universal wireless charging system. That system is fed by the magnetic field and photons of the sun. Photons are released from electrons after they are energized by the sun then fall back to the ground state by giving off a photon to our tissues.

The Biochemical Interaction Between Dihydroxyacetone (DHA) and Adenosine Triphosphate (ATP)

Docosahexaenoic Acid (DHA) is an omega-3 fatty acid that can affect Adenosine Triphosphate (ATP) production, while Dihydroxyacetone (DHA) is a simple sugar that is phosphorylated using Adenosine Triphosphate (ATP) by certain enzymes.

Docosahexaenoic Acid (DHA) is the lipid that does this most effectively. It is this light that drives biochemical flux, and not Adenosine Triphosphate (ATP).

There are about 100,000 chemical reactions happening in every cell each second. The chemical reaction can only happen if the molecule which is reacting, is excited by a photon. Once the photon has excited a reaction, it returns to the field of play in a cell and is available for more reactions at the speed of light. We evolved in an ocean of light oscillations. Since we can only see and hear a very small bandwidth of wavelengths we are blind and deaf to most of the magic that happens all around us. They occupying other wavelengths at small scales and your cell membranes do sense them.

For example, if you don't believe oscillations are capable of transferring energy, you should know that ultrasound oscillations are silent and highly energetic. They can be used to heal bones by itself. I know because I use it to do this in my clinic.

Life begins at the cell membrane level.

The environment meets our cells at the cell membrane.

In a cell, collagen is a biological nanowire that forms a tensegrity structural skeleton that links the cell membrane to the nucleus.

It is flexoelectric and piezoelectric, and so are our cell membranes.

Water makes up 99% of the molecules in a cell because it is a small sized molecule. Water Is The Battery of Life.

It is a repository for electromagnetic solar radiations. Water interacts most with the Infrared (IR) part of the electromagnetic spectrum of our sun. Once Infrared (IR) light hits the water it shrinks while it increases its Exclusion Zone (EZ). Theses are the givens in life's thermodynamic quantum puzzle.

It All Begins With The Cell

All living organisms are made up predominantly of dipolar molecules and dielectric molecules that are packed densely together and are extremely dynamic in their relationships to one another. They represent special solid-state systems where electromechanical and viscoelastic forces constantly interact to alter sizes and shape to control energy flows in a system that is metastable of far from equilibrium. Under these conditions, energy from the oxidation of foods, the sun's light, and the vibrations of the Earth's motion's could "pump" up the system, resulting in collective modes of vibration to become trapped in cell membranes like a giant capacitor of energy.

They key for life, is ramping up this stored energy to create subatomic particles that become coherent so that at night time when the matter in us is its most condensed we can align all those oscillations and waves to act in phase and create massive energy flows that create the spark of life in the condensed matter in us. This is precisely what a laser does.

Our cellular membranes typically have an enormous electrical field of some 107 V/m across them. A substantial proportion of the intracellular volume is also taken up by organelles such as the mitochondria, where foods are oxidized to Carbon Dioxide (CO2), and Water (H2O) with the occasional generation of Adenosine Triphosphate (ATP) mostly during the day, and ribosomes on which polypeptide chains are synthesized by ubiquination signaling.

Royal Raymond Rife, is known for his microscopes, which he claimed could observe live microorganisms with a magnification considered impossible for his time, and for an "oscillating beam ray" invention, which he thought could treat various ailments by "devitalizing disease organisms" using radio waves.

In the 1930's, he claimed that by using a specially designed optical microscope, he could observe microbes which were too small to visualize with previously existing technology. Rife also reported that the "beam ray" device could weaken, or destroy the pathogens by energetically exciting destructive resonant frequencies in their constituent chemicals. Today, we have companies, showing us that certain frequencies and their resonant frequencies can have a massive effect on the biology of cells. It is time to rethink our truths because we are on the wrong scale of science to see how things really work.

Science is showing us that pushes, and pulls on a cells tensegrity system.

Mitochondria are the ultimate antenna/sensor for magnetoelastic oscillations that act as quantum heat engines." - in "Tensegrity No.12: The Quantum Cell Membrane", 14 December 2014.

The Beneficial Effects of Microcurrent Therapy on Muscle Damage

"This study was undertaken to investigate **the efficacy of Ultra-Low Microcurrent** delivered by the Electro Pressure Regeneration Therapy (EPRT) device for **the management of Chronic Wounds,** 23 patients with chronic skin ulcers, and 2 with abdominal dehiscence that was present for an average of 16.5 months, who were not responsive to standard conservative treatment in a hospital setting, were treated with the Electro Pressure Regeneration Therapy (EPRT) device. Wounds were treated with direct current (maximum of 3 mA) of 1 polarity for 11.5 min and then with a current of the opposite polarity for another 11.5 min.

Treatment was applied through ultra-low microcurrents (in the mA to nA range) conducted through special wraps applied above and below the wound.

The results revealed **that 34.8% of cases achieved complete wound healing after an average of 45.6 hours of treatment**, and **39.1% achieved 50% healing after an average of 39.7 hours of treatment.**

Several patients Achieved Significant Results after 1 to 2 treatments.

The Electro Pressure Regeneration Therapy device Accelerated Healing and also appeared to negate (counteract the outcome) the effect of a person's age on wound healing. Cells have complex electricity that is sensitive to changes in electrical fields. Metabolic, immunologic, and physiologic changes have been found to develop in different cell cultures after electrical current is applied.

Endogenous Bioelectricity, which includes electrical current and electrical potential, Is Essential For Life.

Electrical fields have been shown to control the direction and rate of epithelial cells that migrate into the wound.

Acustat Electro-membrane Microcurrent Therapy has been used to treat postoperative pain and soft tissue injury; however, its efficacy in reducing symptoms of muscle damage is not known.

In a Study "Electro-membrane microcurrent therapy reduces signs and symptoms of muscle damage", Medicine & Science in Sports & Exercise, April 2002, Accustat Electro-membrane Therapy reduced the severity of symptoms in 30 healthy men with induced muscle damage.

Direct and indirect evidence suggests that free radicals play a key role in normal biologic function and in the pathogenesis of certain human diseases. **Oxidative stress as a consequence of an imbalance in prooxidant-antioxidant homeostasis in chronic wounds is thought to drive a deleterious sequence of events, finally resulting in the non-healing state.**

Tumor Necrosis Factor - a biosynthesis has been shown to be reactive oxygen species – inducible as well.

Actually, the device used in this experiment **was supposed to deliver electrons to tissues and then to saturated free radicals with required electrons.**

The fact that these electrons are focused on a small region of the body may explain why healing changes appeared so rapidly.

The actual tissue regeneration coupled with absence of the age factor in healing, along with concomitant improvement noted in the general condition of the patient, points to a highly potent antioxidant effect on local tissues, as well as on tissues in general.

This reduces free radicals and might facilitate tissue repair." - "Ultra-Low Microcurrent Therapy: A Novel Approach for Treatment of Chronic Resistant Wounds", in Advances in Therapy, November/December 2007.

Ultra-Low Microcurrent in the Treatment of Disease

"The results of this preliminary trial showed that Ultra-Low Microcurrent has Therapeutic effects on:

1. Diabetes.
2. Hypertension.
3. Wound Healing.

Presumably, one of mechanisms of action is its antioxidant activity.

The action of Electro Pressure Regeneration Therapy is to produce electrical pressure rather than an electrical jolt as produced by a Transcutaneous Electrical Nerve Stimulator.

This steady stream of electrons is what makes the Electro Pressure Regeneration Therapy a super antioxidant and not only does this correct malalignments in the cells electrical system but it also eliminates free radicals and then stimulates the mitochondria to produce Adenosine triphosphate (ATP). Microcurrent has been successfully used to enhance soft tissue healing and to treat Fracture Nonunion (broken bone that is not healing).

Microcurrent relieves Myocontracture (muscle contracture), and can enhance conventional rehabilitation programs for children with Cerebral Palsy.

Studies from the 1980s suggest that **Microcurrent Therapy is effective at relieving the side effects of radiation therapy.**

The investigators have found that **direct Electrical Therapy was effective in healing Gum Abscess, and Accelerated Wound Healing.**

Substances that **increase electrical field, such as prostaglandin E2, enhance the wound healing rate and increase cell division.**

Electrical fields stimulate secretion of growth factor.

Low mA current stimulates Adenosine Triphosphate (ATP) production.

It is discovered in another study that **Microcurrent stimulates dermal fibroblasts** and U937 cells to secrete transforming growth factor-β1, **a major regulator of cell-mediated inflammation and tissue regeneration.**

Oxygen free radicals play a major role in the failure of ischemic wound healing, while antioxidants partly improve the healing in ischemic skin wounds.

Oxygen free radicals mediate the inhibition of wound healing following Ischemia-Reperfusion [tissue damage that occurs when blood supply returns to an organ after a period of oxygen deprivation (Ischemia)], and Sepsis.

It seems that Diabetes Mellitus, Cardiovascular Disease, such as Hypertension, and Delayed Wound Healing, Have a Common important basic pathogenesis, which is related to Imbalance Between Free Radical Production and Removal.

The use of Ultra-Low Microcurrent might help in stabilizing mitochondria, working as antioxidants and therefore, enhancing normal function of β-cells and vascular tissue.

Treatment with Vitamin E, Vitamin C, or Glutathione

Several clinical trials have demonstrated that **Treatment with Vitamin E, Vitamin C, or Glutathione improves insulin sensitivity in insulin-resistant individuals.**

The acute effects of hyperglycemia-dependent endothelial cells dysfunction are counterbalanced by antioxidants.

Conclusively, oxidative stress and oxidative damage to tissues are common pathology of chronic diseases, and using antioxidants, such as the Electro Pressure Regeneration Therapy device used in this experiment, might change the concept of management of chronic diseases.” - Dr Bok Y. Lee, MD, FACS, Professor, Department of Surgery, New York Medical College, in “Ultra-low Microcurrent in the management of Diabetes Mellitus, Hypertension and Chronic Wounds: report of twelve cases and discussion of mechanism of action”, International Journal of Medical Sciences, 6 December 2009.”

The Efficacy & Antioxidant Effects of Ultra-Low Microcurrents

“Otto Van Guericke, who rotated a ball of solidified sulfur to create static electricity in 1672, invented the first electrical instrument in the present civilisation. Amber was the first material used to generate electricity, which could be generated by rubbing it with the hands. Static electricity machines were the first instruments and, with the machine age by the 18th century, **were powerful enough to destroy superficial tissue and be used for cauterization. Ultraviolet Ray machines invented by Strong in 1897 were still in use in 1937. The healing effects of electricity have always been ill understood. In order to understand how electrical currents can function as an antioxidant, the formation and effects of free radicals and their interaction with antioxidants needs to be understood.**

Oxidation and the formation of Free Radicals

We know that the atom is made up of protons, neutrons and electrons.

An inert Oxygen molecule is stable because the outer shells contain 8 electrons arranged in 4 pairs. When molecules with weak bonds split they can leave atoms with unpaired electrons, which is what free radicals are. This produces an atom or molecule looking for an electron to make up a stable pair.

In the 1840’s Michael Faraday discovered that Oxygen is attracted to a magnet. In 1925 Robert Millikan explained why Oxygen is magnetic using the then recently developed quantum theory.

The chemical reactions leading to this are either oxidation or reduction.

Oxidation is a loss of electrons while reduction is a gain of electrons.

In the initiation phase free radicals are formed from molecules readily giving up their electrons. **An example of this is hydrogen peroxide.** In the propagation phase the chain carrying radicals are alternately consumed and produced. In the termination phase the free radicals are destroyed. Thus without termination by an agent such as an antioxidant, a single free radical can damage numerous molecules. A certain amount of oxidative function is necessary for proper health.

For example, oxidative processes are used by the immune system to kill microorganisms. Sometimes, however, the level of toxic reactive oxygen intermediates overcomes the antioxidative defenses of the host resulting in an excess of free radicals and a state called oxidative stress. **These Free Radicals can induce local injury by reacting with lipids, proteins and nucleic acids.**

The interaction of free radicals with cellular lipids leads to membrane damage and the generation of lipid peroxide by-products.

Antioxidants and their effects on Free Radicals

Antioxidants are chemicals that have the ability to donate electrons without becoming free radicals themselves. Cells contain a number of antioxidants that have various roles in protecting against free radical reactions. The major water-soluble antioxidant metabolites are Glutathione (GSH) and Vitamin C, which reside primarily in the cytoplasm and the mitochondria.

Glutathione

Glutathione is a tripeptide made up of glutamic acid, cysteine and glycine covalently joined end-to-end. Glutathione peroxidase is an enzyme that catalyzes the reaction between Glutathione (GSH) and hydrogen peroxide leading to water and Oxidized Glutathione (GSSG) that is stable.

Glutathione (GSH) and Vitamin C

Glutathione (GSH) and Vitamin C act synergistically as a powerful antioxidant pair, where Vitamin C helps recycle oxidized glutathione back into its active, reduced form, enhancing the body's ability to combat oxidative stress.

Together, they improve detoxification, support immune function, and boost overall antioxidant capacity.

Vitamin E

Vitamin E and the carotenoids are the main lipid-soluble antioxidants.

Vitamin E is the major fat-soluble antioxidant in cell membrane and can break the chain of lipid peroxidation. Despite the actions of antioxidant nutrients, some oxidative damage will occur and accumulation of this damage throughout life is believed to be a major contributing factor to aging and disease.

Mitochondria and their role in Free Radical Damage

The cell is a complex structure. **The mitochondrion is where most of the action takes place. This is the powerhouse of the cell, and is where free radicals can do most of their damage. The Food we Eat is oxidized to produce high-energy electrons**, that are converted to stored energy. **This energy is stored in high-energy phosphate bonds in the form of Adenosine Triphosphate (ATP).**

The Electron and its Role in Electric Currents

The oxidative process takes place at a subatomic level with the electron being the main player. Electrons are the smallest of the charged subatomic particles.

In order for an electric current to flow it needs a pathway called a conductor.

Etiology of Chronic Wounds

Results: 92 % of the lesions were stages 3 or 4.

The age of the lesions varied from 6 to 60 months, with an average of 18.5 months.

100% of the Lesions Healed in an average of 48 hours of Treatment, i.e. an average of 16 days.

Conclusion

In conclusion: 25 Chronic Skin Ulcers present for an average of 18.5 months and not responding to standard conservative treatment in a hospital setting were **Treated with the Ultra-Low Current, Ultra-Low Frequency Device.**

1. **100% showed response to the treatment.**
2. **100 % healed in a maximum time of 7 weeks.**
3. **Average time of healing was 48 hours of treatment over 16 days.**
4. **Surgical debridement was unnecessary as the necrotic tissue appeared to disappear spontaneously.**

It has also been known that **the lower the frequency of an electrical device, the more permanent the effects of that device.** This observation was borne out in this study.

None of the healed lesions has shown any sign of recurrence to date after a period ranging from 6 to 18 months.

From what we know about the effects of free radicals and the mechanism of antioxidants in neutralizing them, **we can see a remarkable similarity in the action of the ultra-low currents used in this study.** The steady flow of electrons in a relatively low concentration appears to act exactly as one would expect from any antioxidant. The fact that these electrons are focused on a small region of the body may explain why healing changes appeared so rapidly.

The actual regeneration of the tissue coupled with the absence of the age factor in healing and the concomitant improvement noticed in the patients' general condition all point to a highly potent antioxidant effect on the local tissues as well as generally.

There is enough evidence to show that a low concentration steady stream electron flow produced in the manner described acts as a highly potent antioxidant that can be focused to any area of the body.

This study opens a door to studying this type of technology in the many disease processes that are initiated by free radicals." - Dr Bok Y. Lee, MD, FACS; Dr Alfred J. Koonin, M.B., FRCS; Dr Keith Wendell, Ph.D.; Nurse John Hillard, RN, in "The Antioxidant Effects of Ultra-Low Microcurrents", December 2000.

Necrotic Tissue Regenerate

"ElectroRegenesis Therapy Device successfully healed the most stubborn chronic wounds in 6 weeks or less. It also Regenerated Necrotic Tissue, making surgical intervention unnecessary, according to the results of a study "The Antioxidant Effects of Ultra-Low Microcurrents" presented at The American Academy of Anti-Aging Medicine's 8th International Congress in Las Vegas, December 2000. The ElectroRegenesis Therapy Device (ERTD) manufactured by ElectroRegenesis in Pacific Palisades, CA, **holds great promise to heal wounds more quickly and thoroughly than currently available standard treatments.**

The study, led by Dr Bok Y. Lee, MD, FACS, Professor of surgery at New York Medical College [Surgeon and medical researcher renowned for his lifetime of work in surgical care and spinal cord injury], included 25 Chronic Wounds with an average duration of 3 years not responding to standard conservative treatment.

Wounds included:

1. **Long-term Decubitus Ulcers.**
2. **Amputations.**
3. **Diabetic lesions.**
4. **Paraplegic wounds.**
5. **Quadriplegic wounds.**

All 25 patients were hospital inpatients.

The Wounds were treated with a direct current of a maximum of 4 milli-amperes of one polarity for 11 minutes, and then the current of the opposite polarity for another 11 minutes. A single treatment lasted 31/2 hours. Patients received 5 treatments per week, **until their wounds healed completely.**

The average time to complete wound healing was 14 treatments, or about 3 weeks of treatment 5 times a week.

> ***"The longest time a patient took to heal was 6 weeks."*** *- Dr Alfred J. Koonin, MD*

> *"The ERTD represents a major advancement for treating the most* ***Chronic, Treatment-Resistant Wounds. The device is a safe, non-invasive therapy for a range of serious, difficult-to-treat health problems."*** *- Dr Bok Y. Lee, MD, FACS*

ElectroRegenesis Therapy Device Eliminates Surgery

Researchers also found **ElectroRegenesis Therapy Device eliminates the need for surgical debridement of necrotic tissue.**

To qualify for the study, patients had to have had a Chronic Wound that failed to respond to standard treatment for at least 3 months.

Patients continued their current wound management treatment while receiving ElectroRegenesis Therapy Device stimulation.

Before ElectroRegenesis Therapy Device treatment, foam bandages soaked in ordinary tap water are wrapped above and below the wound.

A black silicon bandage is wrapped over the foam bandage and wires leading from the ElectroRegenesis Therapy Device are clipped to the silicon bandage.

Dr Koonin notes that **physicians who had been treating these patients "were more than surprised" at How Quickly and Completely the Wounds Healed.**

> ***"Several patients had significant Improvement in 2 treatments. None of the patients required surgery. Necrotic Tissue appears to Regenerate. About half the patients in the study had some Dementia. As a side effect of treatment, we noticed Significant Improvement in their Cognitive Behavior As Treatment Progressed."***

One unexpected side effect Dr Koonin hopes will be better understood as results from the multi-center study are analyzed, is **the cognitive improvement seen in several patients with dementia** included in the initial 25-patient study." - in "Device heals chronic wounds quickly", Clinician, 1 March 2001.

[For further reading on the use of electrical stimulation for wound healing, see also: Sheffet A, Cytryn AS, Louria DB. Applying electric and electromagnetic energy as adjuvant treatment for pressure ulcers: A critical review. Ostomy/Wound Management 2000; 46(2):28-33, 36-40, 42-44. Gardner SE, Franz RA, Schmidt FL. Effects of electrical stimulation on chronic wound healing: A meta-analysis. Wound Repair and Regeneration 1999; 7(6):495-503. Kloth LC, McCulloch JM. Promotion of wound healing with electrical stimulation. Advanced Wound Care 1996; 9(5):42-45.]

> ***"A number of studies on Wound Healing have explained the cellular repair observed to Ultra-Low Microcurrents acting as Mega-Anti-Oxidants that donate electrons to free radicals to transform them back into stable molecules and contain or even reverse this DNA damage at the molecular level."*** *- Dr Bok Y. Lee, MD, FACS, in "Noninvasive Assessment of Visco-Elasticity in the Presence of Accumulated Soft Tissue Fluid", Journal of Surgical Research, September 2007.*

The Therapeutic Value of Light and Colour

"In the effort to obtain relief from suffering, many of the more simple but potent measures have been overlooked

Sunlight is the basic source of all life and energy upon earth.

Deprive plant or animal life of light, and it soon shows the lack and ceases to develop. Place a seed in the very best of soil or a human being in a palace, shut out the light, and what happens?

Without food, man can live many days; without liquids a much shorter time; but not at all without the atmosphere which surrounds him at all times and to which he pays so little attention.

The Forces on which life mostly depends, are placed nearly or quite beyond personal control.

For centuries scientists have devoted untiring effort to discover means for the relief or cure of human ills and restoration of the normal function.

Yet **In neglected Light and Colour There Is a Potency Far Beyond that of drugs and serums.**

In order that the whole body may function perfectly, each organ must be working.

When the spleen, the liver, or any other organ falls below normal, it simply means that the body laboratories have not provided the required materials with which to work, either because they are not functioning, as a result of some disorder of the internal mechanism, or because they have not been provided with the necessary material. Before the body can appropriate the required elements, they must be separated from the waste matter.

Each element gives off a characteristic colour wave.

The prevailing colour wave of hydrogen is red, and that of oxygen is blue, and each element in turn gives off its own special colour wave.

Sunlight, as it is received by the body, is split into the prismatic colours and their combinations, as white light is split by passage through a prism.

Everything on the red side of the spectrum is more or less stimulating, while the blue is sedative. There are many shades of each colour, and each is produced by a little different wave length. Just as sound waves are tuned to each other and produce harmony or discords, so colour waves may be tuned, and only so can they be depended on always to produce the same results.

If one requires a dose of castor oil, he does not go to a drug store and request a little portion from each bottle on the shelves.

I see no virtue, then, in the use of the whole white light as a therapeutic measure when the different colours can give what is required without taxing the body to rid itself of that for which it has no use, and which may do more or less harm. If the body is sick it should be restored with the least possible effort.

There is no more accurate or easier way than by giving the colour representing the lacking elements, and **the body will, through its radioactive forces, appropriate them and so restore the normal balance.**

Colour is the simplest and most accurate therapeutic measure yet developed.

For about 6 years I have given close attention to the action of colours in restoring the body functions, and I am perfectly honest in saying that, after nearly 37 years of active hospital and private practice in medicine and surgery, I can produce quicker and more accurate results with colours than with any or all other methods combined - and with less strain on the patient. **In many cases, the functions have been restored after the classical remedies have failed.** Of course, surgery is necessary in some cases, but **results will be quicker and better if colour is used before and after operation. Sprains, bruises and traumata of all sorts respond to colour as to no other treatment. Septic conditions yield, regardless of the specific organism. Cardiac lesions, asthma, hay fever, pneumonia, inflammatory conditions of the eyes, corneal ulcers, glaucoma, and cataracts are relieved by the treatment.The treatment of carbuncles with colour is easy compared to the classical methods. One woman with a carbuncle involving the back of the neck from mastoid to mastoid, and from occipital ridge to the first dorsal vertebra, came under colour therapy after 10 days of the very best of attention. From the first day of colour application, no opiates, not even sedatives, were required. This patient was saved much suffering, and she has little scar. The use of Colour in the Treatment of Burns is· well worth investigation by every member of the profession. In such cases the burning sensation caused by the destructive forces may be counteracted in from 20 to 30 minutes, and it does not return.**

True burns are caused by the destructive action of the red side of the spectrum, hydrogen predominating. Apply Oxygen by the use of the blue side of the spectrum, and much will be done to relieve the nervous strain, the healing processes are rapid, and the resulting tissues soft and flexible.

In a very extensive burn in a child of 8 years of age there was almost complete suppression of urine for more than 48 hours, with a temperature of 105 to 106 degrees. Fluids were forced to no effect, and a more hopeless case is seldom seen. Scarlet was applied just over the kidneys at a distance of 18 inches for 20 minutes, all other areas being covered, 2 hours after, the child voided eight ounces of urine. In some unusual and extreme cases that had not responded to other treatment; normal functioning has been restored by colour therapy.

At present, therefore, I do not feel justified in refusing any case without a trial. Even in cases where death is inevitable much comfort may be secured.

There is no question that light and colour are important therapeutic media, and that their adoption will be of advantage to both the profession and the people." - Dr Kate W. Baldwin, MD, FACS, Senior Surgeon, Woman's Hospital, Philadelphia, in "The Therapeutic Value of Light and Color", Atlantic Medical Journal, April 1927.

What Is Light Therapy?

"The most appropriate name for Light Therapy is probably: "Photoluminescence." So extensive has the research been in this area, and so varied the researchers, that it has been called by several names. The following terms are used interchangeably to indicate the Photo-Oxidative Process:

1. Ultraviolet Blood Irradiation
2. Hemo-irradiation
3. Photoluminescence
4. Photopheresis
5. Photochemotherapy
6. Photobiological Therapy
7. Photo-oxidation (Douglass)
8. Photon Pump
9. Photodynamic Therapy

Dr George Miley was a clinical physician who practised Photoluminescence extensively in the 1930's. **His work clearly demonstrated another important effect of Light Therapy; an Increase of Oxygen Absorption by the Blood following Ultraviolet exposure. Dr Miley also reported on 151 consecutive unselected cases of acute infection treated by photoluminescence.** The results were phenomenal. **In those cases that were treated early, 100% of the patients recovered fully. In moderately advanced cases, 98% recovered; even patients who were moribund (near death) experienced a 42% recovery rate.**

Hancock and Knott presented the following explanations of why they found **Ultraviolet Irradiation of the blood to work:**

1. Coagulation of bacteria caused by the creation of an "autogenous [self-generating] vaccine."
2. Increased germicidal properties of the blood and an increased number of antibodies (we call this effect "stimulation of the immune system").
3. Secondary radiation by treated blood cells (luminescence).
4. Increase of Vitamin D content and Cholesterol in the Blood Plasma.
5. Increased oxygen absorption by the blood.

The first article on the therapeutic efficacy of Phototherapy was published in ("Irradiated Blood Transfusion in the Treatment of Infections", Northwest Medicine), June of 1934. Written by Hancock and Knott, it described many of their own cases. Though **the article revealed the incredible power of Ultraviolet light in the Cure of Various Infections.** The work of Hancock and Knott took ultraviolet therapy a giant step forward. **They had demonstrated that Ultraviolet Light could be used Effectively in the Treatment of Bloodstream Infections.**

> ***"The Toxins in the Bloodstream, Exposed to Ultraviolet Irradiation Are Inactivated. Clinical experiments have further determined that the beneficial energy is stored up in the rayed blood temporarily, and if such blood can be returned to the bloodstream immediately after it has been irradiated, it will throw off secondary irradiation which will stimulate and energize the patient."***

By June of 1942, 6,520 patients had been treated with Ultraviolet Therapy. Not only had the treatment worked nearly every time, it had done so in the complete absence of any harmful effects.

Contraindications

Dr George Miley did note in 1942 that the **Sulfa Drugs could not be given safely within the first 5 days following Ultraviolet Blood Irradiation Therapy without risking a severe Toxemia, Pulmonary Edema (excessive serous fluid in the lungs) and renal (kidney) shutdown.** He also noted that **those patients who have photo-oxidation therapy have a much shorter convalescent period than those who receive both sulfa drugs and photo-oxidation therapy.** The situation was quite confusing; **because some patients with Staphylococcus septicemia survived, and had no more stormy course than those with other infections, but others promptly died.** Virgil K. Hancock reported on 2 cases of Staphylococcus septicemia, which is generally fatal, who recovered promptly with hemo-irradiation (Rebbeck, "American Journal of Surgery", December 1942).

There are 4 basic Biochemical & Physiological Effects of Ultraviolet Light Therapy:

1. **Bactericidal Activity.**
2. **Detoxification.**
3. **Vasodilatation.**
4. **Increased Blood Oxygen Values.**

These effects are well-known, and have been adequately reported.

It seems unlikely (Miley remarked), that any of these 4 Effects of Ultraviolet could alone, or combined completely account for the remarkable results seen in the treatment Ofthrombophlebitis (inflammation in a vein, blood clots form, and block one or more veins, often in the legs).

Treatment of Thrombophlebitis

It seems that one or more physiological, neurological, or biochemical effects that are not understood must be taking place to account for the; **Profound And Rapid Change Seen in the Treatment of Acute Thrombophlebitis with Ultraviolet Irradiation.**

It is interesting to note that: **Ultraviolet Blood Irradiation does not cause an increase in the tone of intestinal muscle in a normal person; there are no abdominal cramps,** or other indications of a change in the physiological status of normal intestinal musculature.

Yet, **when Photoluminescence is given to a patient with an obviously disturbed autonomic nervous system, involving smooth muscle tone of the gastrointestinal tract, this part of the autonomic nervous system, hopelessly out of balance, comes very quickly back to normal.**

This return to normal muscular tone obviously occurs in the Treatment of Thrombophlebitis, just as it does in a gastrointestinal smooth muscle disease.

Somehow, the smooth muscle elements of that portion of the peripheral vascular system that are diseased are directly affected by the energized light; the rest of the system is not. In view of the fact that the photon energy attacks only the localized peripheral autonomic vascular imbalance, it would appear the body sets up some sort of temporary omni range, that brings the necessary photonic energy to bear on the specific area where it is needed.

There is a marked, generalized peripheral vasodilatation (a pinkening of the skin) with, as Miley says: "almost monotonous frequency" following a blood irradiation. However, in the diseased blood vessels and the musculature of the intestine, the effect is exactly opposite.

The effect there is a vasoconstriction - a constricting of the veins.

Miley summarised this mysterious action as follows:

> *"It is interesting to observe that the grossly discernable vasodilatation effects noticed following application of ultraviolet blood irradiation therapy occur in apparently normal humans, as well as in those who are suffering from various disease processes, whereas an increase in tone of normal gastrointestinal smooth muscle is not apparent, at least not to the extent that it produces colicky or cramp-like contractions. Likewise, as just stated, no evidence of an increase in smooth muscle tone, as in acute thrombophlebitis with edema, appears in normal individuals following blood irradiation but, on the contrary, only vasodilatation occurs.* ***Therefore, it must be assumed that there exists a profound and fundamental regulating effect of the radiated blood upon the autonomic nervous system; this effect could be described as a "normalising effect", and it becomes most apparent in definite imbalances of the autonomic nervous system."***

It is as though the photon-activated blood has a life of its own, and knows where to go (homing in on diseased veins for instance; and what to do), increasing the tone of the diseased vessels; whereas there is a generalised vasodilatation in the rest of the body.

Treatment of Bronchial Asthma

Dr George P. Miley, et al, of Philadelphia, Pennsylvania, studied 80 persons suffering from **Severe Intractable Bronchial Asthma.** It is important to note that these patients were Intractable, meaning no therapy was helping to any material extent. This study was conducted from 1 November 1938 to 1 October 1942.

"Intractable", in these cases was defined as:

1. Failure to respond to removal of known aggravating extrinsic factors such as dust, pollens, foods, etc.
2. Unresponsiveness to all desensitization efforts.
3. Unresponsiveness to bronchoscopy and bronchoscopic drainage.
4. Failure to respond to sinus infection therapy.
5. Temporary or no relief following inhalation or injection of epinephrine (an adrenal hormone) or epinephrine-like preparations.

The Ultraviolet Blood Irradiation Treatments, were administered every 4 to 6 weeks until the patients Symptoms Had Improved. After a few months, the frequency was reduced to a treatment every 8 to 10 weeks. Injections of epinephrine, and other medications were withheld as much as possible. **In most cases, they were gradually and then completely eliminated.**

Clinical Observations on Asthma Therapy

1. **During the first night after the initial blood irradiation, a moderately severe asthmatic attack is likely to occur, especially in patients with severe asthma.**
2. **Marked relief in the frequency and severity of the dyspnea attacks is noted after the second, or third blood irradiation,** given at intervals of 3 to 6 weeks after the initial treatment.
3. During the first year, it is advisable to administer ultraviolet blood irradiation therapy 8 to 12 times at 3 to 6 week intervals.
4. **After the 1st year, the repetition of blood irradiation 2 to 5 times yearly will usually keep a severely affected patient free from asthmatic attacks.**
5. **A cyanosis of many years standing slowly disappears within a year of initiation of Photoluminescence.**

6. A marked and relatively permanent increase in the patient's general resistance occurs, so much so that many patients who have been under constant treatment will be enabled to lead normal, useful lives again with little or no discomfort.

7. A 6 month withdrawal of ultraviolet blood irradiation therapy after 1 or 2 years will occasionally cause a moderately severe exacerbation of the asthma. After irradiation is repeated, the symptoms again subside, though in some cases more slowly than originally.

8. Use of ephedrine or epinephrine inhalants is required only rarely for most patients.

9. There is a complete absence of any toxic effects from the treatment in all patients.

> *"If a patient has had Intractable Bronchial Asthma for 38 years, plus insomnia for 6 years despite of Medical Trade Care, and h**as little or No Asthma, plus Freedom from Insomnia, for almost 4 years from the time she first is given Ultraviolet Blood Irradiation Therapy,** she obviously has had much more than psychotherapy. If the same patient has had, unknown to her, a withdrawal of the therapy by closing off the hemo-irradiator, cutting off the source of Ultraviolet Rays from the returning blood, and begins to show signs of severe asthma again, **she is suffering from a true Ultraviolet Deprivation. If we next really give the patient Ultraviolet Blood Irradiation Therapy, and her symptoms once more clear up, this is proof positive that such a patient not only has been benefitted by the Ultraviolet Irradiation of Blood,** but **has been suffering for years from severe Ultraviolet Deprivation, which apparently plays a much greater part in this disease, as well as others, than has been suspected."** - Dr Miley, MD in "Archives of Physical Therapy", September 1943.*

50 years have passed since Miley attacked the foundations of modem medicine with Photo-Therapy. There is now a scientific explanation for the use of Photo-Irradiation in Allergy. **All Toxic Substances in the body Have a Fluorescence, including chemicals, sick cells (cancer), and allergens (weeds, strawberries, or whatever you are allergic to). This fluorescence is, in effect, a marker which light energy targets for destruction. So when light energy (photons) are introduced directly into the blood, as in photo-oxidation, the recovery is often dramatic.**

Treatment of Polio

George Miley and Jens Christensen reported on 58 cases of Polio. Their results were truly amazing in that, in all the cases treated, they only lost one bulbar case. Bulbar polio (polio of the brain) is 40% fatal. The case they lost was near death when seen and was not expected to live. **The other 6 patients with bulbar-spinal polio, also near death when treated, survived.**

"Dr G.J.P. Barger, MD, (Washington, DC): In my experience in giving over 2,500 Ultraviolet Blood Irradiation Treatments, I am glad to be able to **confirm Dr Miley's conservative statements in regard to the efficacy of Ultraviolet Blood Irradiation Therapy in the Treatment of atypical or "virus" Pneumonia, of which I have treated 15 cases, and in the Treatment of Poliomyelitis of the Bulbar type, of which I have treated 23 cases in 3 years, and 6 cases of Spinal Polio.**

In Encephalitis, I have had 3 early cases in children treated by Ultraviolet Blood Irradiation, with Surprisingly Good Results, which seem to be standing the test of time. I have compared my 11 bulbar Polio cases treated in Washington in 1944, by this method, with the series treated by Dr Miley in 1943 in Los Angeles, and find a very close correlation in the results. While the matter of saving life is important, that of a **prompt inactivation of damaging toxins is more important in the evaluation of the efficacy of ultra-violet blood irradiation in polio.**

When called to give ultraviolet blood irradiation to polio cases (I make a point of prompt response within 1 or 2 hours), for the diagnosis of bulbar polio is often followed by death within a few hours.

During the night following the use of blood irradiation in this case, the child's physician phoned the girl's father that they did not expect the child to live thru the night. The child's father, in happy gratitude for what actually happened, wrote a story of her recovery.

> *"Today,* ***10 months after her nearly fatal bout with a dreaded childhood disease,*** *it is hard to realise that* ***my 8 year old daughter is almost entirely recovered; walking, skipping rope, vigorous, and looking forward enthusiastically to a normal life."***

This was his introductory statement in a story written for publication in a widely read magazine, but withdrawn at my request.

Of **a boy of 6, with fulminating bulbar polio, his physician wrote: "I personally feel that your treatment saved his life."**

Encephalitis Lethargica (Sleeping Sickness)

My first case of Encephalitis Lethargica Treated by Blood Irradiation was practically normal 2 weeks after a 2nd blood irradiation, and both his physician and the parents report the boy **100% normal,** with no residual behaviour or other effects after 2 years.

My second case of encephalitis lethargica was treated by ultraviolet blood irradiation 9 months ago. This was a 20 months old child. Repeated checks in this interval show it is developing normally as compared with 2 other children in the same family. **Ultraviolet Blood Irradiation, in my analysis of its effects, mobilizes the defensive mechanisms of the body on a very high level, so that these mechanisms work with markedly increased efficiency in performing their normal functions of combatting micro-invaders of body fluids and tissues.**

Dr Miley has excellently stated this idea in different words.

The results of Ultraviolet Blood Irradiation, in the hands of different men have been so consistent, and the results in the treatment of "virus diseases", for which nothing else has been available, so good to those who have had a chance to watch the results closely, that it seems an opportunity should open up for an extensive trial of this therapy not only in all the "virus diseases", **but also in the rickettsial diseases**, which has been equally lacking in effective therapy.

Dr H.M. Eberhard (Philadelphia, Pa.): In my gastrointestinal clinic we frequently refer cases to Dr Miley, and Dr Christensen especially those where there exists a low oxygen carrying power of the red cells. Often these have been as low as 2 volumes per cent when several blood irradiations had increased the carrying power within 2 weeks to a month. **Cases where recourse to Ultraviolet Irradiation Therapy have been helpful are: Erysipelas, "Virus" Pneumonia, Bronchial Asthma (without Emphysema), and general Acute Blood Infections."**

Dr George Miley (New York, N.Y.): Bacterial Endocarditis cannot be favourably influenced at all by blood irradiation, nor can the course of malignant neoplastic disease be appreciably altered, though secondary infection can be controlled but then only temporarily; leukemia is not influenced favourably by blood irradiation in our experience. The amount of ultraviolet given is relatively small, but it is given intra-venously, which is extremely important, in very carefully calibrated doses, so what is supplied in this type of treatment is intravenous ultraviolet light in carefully adjusted doses." - in "Ultraviolet Blood Irradiation Therapy in acute virus and virus-like infections", The Review of Gastroenterology", 15 April 1948.

Treatment of Cancer

Dr Robert C. Olney, MD, was a highly-respected Surgeon whose articles had been published in the American Journal of Surgery (3 occasions), and the Journal of the International College of Surgeons.

When Olney began to publish his results on **Photoluminescent Treatment of Cancer** in the mid-1960's, he felt certain he would be rejected, so he resorted to publishing a small pamphlet to describe his remarkable cures.

Olney was an avid follower of the works of William F. Koch and Otto Warberg, both of whom claimed that a blocking, or impairment, of oxidation enzymes in cells allows fermentation of sugar, and that this fermentation in cells is the prime cause of cancer.

Olney said that "blocked oxidation" in organisms causes them to become pathogenic (disease-causing), and that this pathological condition is corrected by proper oxygenation; thus, the organisms again become non-pathogenic and, consequently, non-virulent.

Olney stated:

> ***"With our present knowledge, it should be possible to prevent and wipe out cancer and serious infectious diseases."*** *- Dr Robert C Olney, MD, in "Pamphlet", he founded his own hospital, in Lincoln Nebraska, 1950's.*

That's a bold statement, but **Olney backed it up by proving cancer could be completely eliminated with the use of Photoluminescence; which he called Ultraviolet Blood Irradiation.**

The Full Pamphlet Dr Olney said:

"This presentation deals with the prevention and treatment of "blocked oxidation" which we consider the prime cause of malignant, "viral", bacterial, and allergic diseases. **With our present knowledge it should be possible to prevent and wipe out cancer and serious infectious diseases. We are in an era of destructive therapy, powerful poisonous insecticides, fluoride poisoning and "embalmed foods."** This is an era of ignoring the principles of healthful living and then attempting to cure everything by taking an array of pills. **Blocking of, or injury to the vital oxidation process (respiration) of the living cells by oxygen deficiency or various toxic substances, we find to be the most important cause of malignant, viral, bacterial, and allergic diseases.**

Effective prevention and treatment of these diseases depends upon the restoration and maintenance of the normal oxidation. In malignant disease, when the oxidation process is blocked, energy is produced by fermentation, and micro-organisms grow profusely in this condition.

For many years Dr William F. Koch, and Otto Warburg have claimed that blocking of, or **impairment of oxidation in the enzymes and cells allows fermentation of sugar and that fermentation in these enzymes and cells is the Prime Cause of Cancer.**

Koch has also proved that blocked oxidation in micro-organisms causes them to be pathogenic, and that when this condition is corrected these organisms become non-pathogenic, non-parasitic, and non-virulent.

In so many of these conditions patients have a low blood oxygen level. Some are only 50% to 60% of normal, as shown in this paper. As part of this paper are the results of studies made in 1968 which confirm studies by Dr George Miley, MD.

Our Clinical Studies show that intravenous Ultraviolet effectively increases the Blood Oxygen to normal, or near normal in most cases.

In The Treatment The Following Are Very Important:

1. Intravenous Ultraviolet rapidly increases the Oxygen Absorption of the patient bringing the blood oxygen up to normal. The powerful oxidation catalyst stimulates the use of this increased Oxygen or the patient's oxygen at any level to restore the normal cell respiration.

2. The Diet of these patients is extremely important, using foods grown with natural fertilizers and without poisonous fertilizers and insecticides, and eating much of it raw. Since so many patients are deficient in important trace minerals such as magnesium and zinc, it is important to see that these patients are supplied with sufficient trace minerals in chelated form so that they are readily absorbed.

3. Since much of the toxic substances producing these diseases comes from the colon we use Colonic Irrigations.

Treatment of Blocked Oxidation
Case Reports

Case 1

17 January 1969, Miss D.P., 38 years old, was admitted. Past History: 11 years ago a melanoma was removed from the right upper arm. August 1968 subcutaneous tumor mass appeared on the upper left chest just below the clavicle.

Excision and biopsy of this revealed malignant melanoma. Following this she developed a tumor on the right chest at the same level, tumor in the right axilla, abdomen began to become very large, patient had marked difficulty in breathing, and constant cough. There was gradual and painful swelling of the right thigh (all at another medical center).

Present Illness: On entering the hospital, was in critical condition with marked difficulty in breathing, constant cough, cyanosis, abdomen very large and pendulous containing a large amount of fluid in which there were large tumor masses palpable throughout, especially the entire lower abdomen and lower tight quadrant.

Extremities: The right thigh from the knee to the hip was very swollen and painful, about twice normal size.

Diagnosis: **Generalized Malignant Melanoma.**

Treatment: Patient was immediately given Ultraviolet Blood Irradiation (UBI) to overcome hypoxemia, the oxidation catalyst (Koch Glyoxylide) intermuscularly, ultra mycro-wave therapy throughout the body, diet consisting of raw vegetables and fruits eliminating all meats and fluorides, Colonic Irrigations to remove the toxic material from the colon, and large doses of trace minerals especially magnesium and zinc with natural Vitamin C, and natural Vitamin E, in addition to other natural vitamin supplements.

UBI treatments given on 17, 20, 24 January, and once a week following this. Koch Glyoxylide given on 17 January, 20 February, 21 March, 2 June, and 17 July.

Mycro-wave given on 17, 27 of January, and 3, 6, 12, 19, 26 of February, and once a week following this. Within three weeks the mass in the right axilla had disappeared as well as the tumor of the right chest wall, and the abdomen was becoming definitely smaller and the tumor masses much smaller.

At the end of 6 weeks of this treatment, patient had no difficulty in breathing, the right thigh was normal size and no pain the abdomen had returned to normal size with no fluid, and the tumor masses were practically gone with only very small evidence of tumor in the lower abdomen. Patient up and about in a normal manner except for some weakness following her long illness.

This patient will remain under treatment in the hospital for another 2 or 3 weeks when she will be discharged to go to her home in Utah with instructions to return in approximately 3 months for examination and further treatment for the prevention of further development of malignant melonoma.

This type of case will need observation over a period of several years to be sure as possible of success. This case illustrates the very early effective results of treatment of the whole program that we are now using for the treatment of all malignancy. This treatment is based upon the evidence (Burk, Dean, National Cancer Institute, "The Prime cause and prevention of Cancer", Konrad Trietsch, Wurzburg, Germany, 1967), that cancer is due to hypoxemia and blocking of oxidation with the development of fermentation of sugars which causes the cancerous growth. **It has been shown that all cancers have one common factor, and that is, fermentation of sugar in the enzymes and cells, replacing normal oxidation. Reversal of this process back to normal oxidation is all important.**

Case 2

Mrs. A.F., age 64, entered hospital on 21 April 1953 with a rapidly developing carcinoma of the left breast. A few years before this she had had cancer of the right breast with a radical mastectomy followed by x-ray therapy. On this occasion mastectomy with removal of axillary lymph glands was performed, but not a radical mastectomy. It was found that the cancer was penetrating the chest wall and into the lung. Post-operative therapy consisted of x-ray therapy, but principally the program of stimulating the Oxygen content and the use of minerals, particularly magnesium and zinc. At first the UBI treatments were given at weekly intervals and after 3 months they were given at monthly intervals and this continued on for 5 years. She continued to take the zinc and magnesium supplement and other general vitamin supplements. **Within a few months there was no evidence of malignancy in the x-ray of the lung.** This patient is now living and well and has had no evidence of recurrence of her malignancy.

Case 3

Mrs. A.R., age 60, entered the hospital 22 June 1960 with a large tender mass in the left abdomen which was thought to be a perinephritic abscess.

Upon operation it was found that patient had a large carcinoma of the splenic flexure of the colon which had ruptured into the abdominal cavity. There were melostatic nodules beyond the primary growth. A Miculitz type operation was performed and in due time closed. Following surgery patient was placed on an intensive program of ultraviolet blood irradiation, given 4 in the first week, and 1 each week thereafter for several months. She was also given zinc and magnesium in adequate amounts with other vitamin and supplements. **Patient made a very excellent recovery from the surgery and is living today.** She kept up with the Blood Irradiation Treatment once a month for 5 years, and also the supplement therapy.

Case 4

Mrs. C.B., age 55, entered the hospital on 4 January 1954 with a nodular tumor of the thyroid. At operation it was determined she had an adeno-carcinoma and sub-total thyroidectomy was performed leaving very little thyroid tissue.

Following her surgery she was given UBI treatments, four in the first week and one each week, following this together with adequate magnesium and zinc therapy. This treatment was continued once a month for 5 years. **Patient is still living and well and has had no recurrence of her carcinoma.**

Case 5

On 30 April 1969 Mrs. I.W., 50 years of age entered Providence Hospital for treatment of a large tumor of the uterus considered to be carcinoma.

Past History: February 1968 patient found to have cancer of the cervix and uterus and was given radium and cobalt treatments for a month. In August 1968 she was examined again and her doctor told her that she had a large cancer of the cervix and uterus and that nothing could be done and told her to "just go home and die." Following this she had 6 months of laetril treatment. (All of this was at other treatment centers – not here.)

On entering Providence Hospital, examination revealed a large tumor of the uterus and pelvis, specifically carcinoma. She was given **Ultraviolet Blood Irradiation** on 1, 2, 6, 14 May and once a week following this.

She was given Koch Glyoxylide on1, 6, 26 May, 6, 16 June, she was given mycro-wave treatments on 1, 6, 14, 19, 29 May, 4, 9 and 30 June. Along with this she was given the **Diet of Raw Vegetables, and Raw Fruits**, together with adequate amount of **Zinc, Magnesium, Vitamin C, Vitamin E, Vitamin B6.**

By 24 June examination revealed a marked reduction in the size of the tumor with only slight discharge from it and it was felt that it was possible to remove the tumor surgically. Hysterectomy was performed on 26 June 1969, by Dr Richard C. Olney, MD, and the entire uterus including the cervix removed and the remaining right falopian tube. **Pathological examination of the specimen removed failed to reveal any viable cancer tissue in the cervix or uterus.**

Patient has made an uneventful recovery from surgery, and is continuing on with a vigorous program of treatment to assure as much as possible no recurrence of her malignancy.

Blood Oxygen Saturation After Intravenous Ultraviolet (Ultraviolet Blood Irradiation)

Hypoxemia is a common and serious factor in so many diseases, and surgical procedures.

Correction of this and bringing the oxygen saturation of these patients to normal or near normal is vitally important in the treatment of these diseases, and the success of serious surgical procedures.

This report deals only with the blood oxygen saturation changes following Intravenous Ultraviolet Therapy (UBI).

(Ultraviolet Blood Irradiation is by use of the Knott Hemo-Irradiator.

A definite amount of patient's blood, 1 1/2 cc per pound of body weight is withdrawn from a vein, citrated and returned immediately to patient after passing through the Knott-Hemo Irradiator and thus exposed to a certain band of ultraviolet light in an exact period of time, 10 cc in 20 seconds.)

For this study 23 patients were selected at random regardless of the diagnosis in which there was clinical evidence of hypoxemia.

Patients were selected in which there was no known condition which would interfere with or change the outcome of these studies. Before the first treatment of intravenous ultraviolet 5 cc of venous blood was removed and immediately taken to the American Optical Oximeter and the oxygen saturation was determined prior to the treatment. In this way the Oxygen saturation was compared with the day previously, and the previous determinations, for the changes which could take place following the Intravenous Ultraviolet Therapy. Normal Oxygen saturation on the American Optical Oximeter is 100% for arterial, and 72% for venous blood.

The following is a brief review of the cases in this study:

1. Mr. L.H. Middle-aged man with Lymphatic Leukemia, Venous oxygen 48%, 24 hours after 1 UBI 65%.
2. Mr. C.G. Metastatic Carcinoma of the lung, Venous oxygen 54%, 24 hours after 1 UBI 66.5%.
3. Mrs. E.H. Hysterectomy for uterine fibroid, Venous oxygen 54.7%, 24 hours after 1 UBI 75%.
4. Miss D.W. Laboratory technician. Apparent good health, but heavy smoker, Venous oxygen 50%, 24 hours after 1 UBI 64%, 24 hours after 2nd UBI 81%.
5. Mr. V.B. Acute severe respiratory infection. Venous oxygen 48%, 24 hours after 1 UBI 65%, 24 hours after 2nd UBI 81%.
6. Mr. C.T. Severe diabetic with cerebral vascular accident, Venous oxygen 48.8%, 24 hours after 1 UBI 84%.

7. Mrs. B.S. Acute Mastoiditis and upper respiratory infection, Venous oxygen 47%, 24 hours after 1 UBI 71%

8. Mrs. H.M. Acute congestive heart failure. Venous oxygen 32%, 24 hours after 1 UBI 56%, 24 hours after 2nd UBI 70%.

9. Mr. E.D. Asthma with acute myocarditis. Venous oxygen 48%, 24 hours after 1 UBI 58%, 24 hours after 2nd UBI 68%.

10. Mr. A.V. Extensive malignancy of the ear and side of the head. Venous oxygen 52%, 24 hours after 1 UBI 60%, 24 hours after 2nd UBI 66%.

11. Mr. P.Z. Severe Diverticulosis of the colon, myocarditis and acute respiratory infection. Venous oxygen 53% 24 hours after 1 UBI 60%, 24 hours after 2nd UBI 66%.

12. Mr. C.C. Patient in critical condition with intestinal obstruction. Acute respiratory infection, Venous oxygen 50%, 24 hours after 1 UBI 63%.

13. Mr. R.D. Complete acute occlusion of the femoral artery at the femoral region with impending gangrene of the leg. Venous oxygen 38%, 24 hours after 1 UBI 73%.

14. Miss A.W. Operated on for cholecystectomy and appendectomy. Venous oxygen 42% 24 hours after 1 UBI 84%.

15. Miss N.S. Coronary insufficiency. Respiratory infection, Venous oxygen 53%, 24 hours after 1 UBI 60%, 24 hours after 2nd UBI 68%.

16. Mr. W.H. Acute cerebral vascular accident with severe acute otitis media and mastoiditis, Venous oxygen 40% 24 hours after 1 UBI 56%, 24 hours after 2nd UBI 66%.

17. Mr. A.C. Myocarditis, Acute respiratory infection, Carcinoma of the prostate, Venous oxygen 34%, 24 hours after 1 UBI 48%, 24 hours after 2nd UBI 60%

18. Mr. R. Stricture of the lower esophagus with almost complete closure of the esophagus and marked dilation, Venous oxygen 32%, 24 hours after 1 UBI 42%, 24 hours after 2nd UBI 57%

19. Mr. B.S. Pericarditis, Cholecystitis and Pyelonephritis, Venous oxygen 47%, 24 hours after 1 UBI 71% 24 hours after 2nd UBI 86%.

20. Mrs. F.B. Severe neurosis, Venous oxygen 29% 24 hours after 1 UBI 83%, 24 hours after 2nd UBI 86%.

21. Mrs. R.B. Thrombophlebitis and Cholecystitis, Venous oxygen 18% 24 hours after 1 UBI 62%.

22. Mrs. P. General carcinomatosis of pelvis from CA of uterus and heavy cobalt treatments, Venous oxygen 43%, 24 hours after 1 UBI 65%, 24 hours after 2nd UBI 80%.

It is important to emphasize that in so many pathological conditions there is a very marked hypoxemia, and that this is a very important factor in the diseased condition. It is important, that the Blood Oxygen saturation is returned to normal as rapidly as possible, in the treatment of these patients or in the performing of extensive surgical procedures, as a matter of giving these patients one of the most important factors in their defense mechanism and resistance.

Summary

Hypoxemia and blocked oxidation followed by fermentation of sugar in the enzymes, and cells we consider to be the prime factor in malignant, viral, bacterial and allergic diseases. A program of prevention and treatment of this condition is presented which has proved in the past, and is proving at this time to be very effective, in correcting the pathological physiology which has taken place and returning normal oxidation to the enzymes and cells for the recovery of these patients." - Robert C. Olney, MD, in "Pamphlet", 1968.

This Studies; 40 years would still be totally ignored by the Medical Trade.

Following the work of Koch and Warberg, Olney did many studies on blood oxygen levels, and proved (again) that **oxygen levels in the blood are always low in ill people. Miley had also done studies on oxygen absorption with the use of ultraviolet irradiation of blood in 1939 (American Journal of Medical Science, 1939). Olney showed, in every case measured, that blood oxygen levels are drastically reduced in sick individuals. He tested everything from heavy smokers to respiratory infection to terminal cancer, and, without exception, the venous blood oxygen levels were depressed before treatment with photoluminescence and increased after treatment. This effect of ultraviolet light on blood has been known since 1925** (Harris, Biochemical Society meeting, South Kensington, England, 7 December 1925). **The vast array of diseased conditions in which blood oxygen levels are depressed. The venous blood oxygen levels before and after treatment with photoluminescence are given.**

Doctors Koch and Warberg firmly established that Oxygen Deficiency blocks the basic physiological oxidation processes in the body.

This makes the body produce required energy through fermentation instead of oxidation. **Koch and Warberg, agree that this is the pathological basis for malignant, infectious diseases.** For instance, **hardening of the arteries (Atherosclerosis) is not caused by Dietary Cholesterol but by Oxygen Deprivation. The theory states that pathogenic organisms become nonpathogenic after oxidation is re-established in them. The remarkable effectiveness of photoluminescence** would seem to confirm these ideas. **What better confirmation than seeing the process work in elimination of disease as the blood oxygen level rises?** In his Monograph, Dr Olney Reported **5 Cases of Cancer, out of which he had 5 recoveries using Ultraviolet Blood Irradiation (**100% is not a bad recovery rate for a disease that is incurable by all "modern" methods).

Case 1

"Mr D. P., a 30-year-old, was admitted to the hospital with a diagnosis of generalized malignant melanoma (a virulent form of skin cancer).

11 years previously, a malignant melanoma had been removed from his right upper arm.

When admitted to the hospital by Dr Olney he had a tumor mass under the skin at the upper left chest just below the clavicle (collar bone).

Excision and biopsy revealed that the malignant melanoma had returned.

He quickly developed metastases (tumor spread) all over his body and his abdomen became very large from tumor growth. He had difficulty in breathing, had a constant cough and was obviously in serious condition. He was blue in the face and cancer could be felt throughout his abdomen. The patient was given ultraviolet blood irradiation therapy immediately and approximately every 3 days for about 1 week and then weekly. Within 3 weeks, the large tumor mass in his right armpit disappeared as well as a tumor on the right chest wall; the abdomen became definitely smaller and the tumor masses much less palpable. At the end of 6 weeks of treatment the patient had no difficulty in breathing; his right leg, which had been extremely swollen, was normal and free of pain; and the abdomen had returned to normal size with no fluid or tumor masses palpable. Olney remarked about this patient: This case illustrates the very early, effective results of treatment with the whole program that we are now using for the treatment of all malignancy.

This treatment is based upon the evidence that cancer is due to hypoxemia (low blood oxygen concentration) and blocking of oxidation with the development of fermentation of sugars which causes the cancer's growth. It has been shown that all cancers have one common factor and that is fermentation of sugar in the enzymes and cells replacing normal oxidation. Reversal of this process back to normaloxidation is all-important.

Case 2

Miss A.F.A., a 64-year-old, entered the hospital on 21 April 1953, with a rapidly-developing carcinoma of the left breast. A few years prior, she had cancer of the right breast with a radical mastectomy followed by x-ray therapy. On this second occasion a mastectomy was performed with the removal of lymph nodes in the armpit. It was found that the cancer had penetrated the chest wall into the lung. Ultraviolet blood irradiation treatments were given at weekly intervals and, after 3 months, were given at monthly intervals and continued for 5 years. “Within a few months there was no evidence of malignancy on x-ray and the patient is now living and well and has had no recurrence of her malignancy”, Olney reported.

Case 3

Mrs. A.R., a 60-year-old white female, entered the hospital on 22 June 1960, with a large mass in the left abdomen which was thought to be an abscess around the kidney. Upon operation it was found that the patient had a large carcinoma of the colon which had ruptured into the abdominal cavity. There were metastatic nodules beyond the primary growth - a serious and terminal cancerous condition. Following surgery the patient was placed on an intensive program of ultraviolet blood irradiation. She was given 4 treatments the 1st week, and 1 each week thereafter for several months.

The patient made an excellent recovery and kept up with the blood irradiation treatments, once a month for 5 years.

Case 4

Mrs. C.B., a 55-year-old, entered the hospital with a diagnosis of tumor of the thyroid gland. During an operation it was determined that she had an adenocarcinoma, so a sub-total thyroidectomy was performed. Following her surgery she was given photo-oxidation treatments, 4 in the first week, and 1 each week following. The treatment was continued once a month for 5 years. She remained well and had no recurrence of her cancer.

Case 5

On 30 April 1969, Mrs. I.W., a 50-year-old, entered the hospital for treatment with a large tumor of the uterus that proved to be cancer. The previous year the patient had been found to have cancer of the cervix and uterus and was given radium and cobalt treatments for 1 month. 6 months later she was re-examined.

Her doctor told her that she had a large cancer of the uterus and that nothing could be done. He told her to "just go home and die."

When examined by Dr Olney she had a large tumor of the uterus and pelvis.

She was given Photo-Oxidation Therapy, 4 treatments the 1st week, and then 1 a week.

A month later, examination revealed a marked reduction in the size of her tumor and it was felt that she was now well enough to have the tumor removed surgically Ahysterectomy was performed. A pathological examination of the specimen failed to reveal any viable cancer tissue in the cervix or the uterus.

The patient made an uneventful recovery and did well with no recurrence of her malignancy. In my own practice, I have also given several cancer patients Photoluminescent treatment. Like Dr Olney, I have found it to be far superior to any other cancer treatment available. However, my treatment has been limited in efficacy by the wavelength of light which I have been using.

I have been employing Ultraviolet-C, while Dr Olney used Ultraviolet-A.

Ultraviolet-C is not the best frequency for treatment of cancer, though, as you will see, it does produce some beneficial results. At the present time, a new blood irradiation device is being engineered that will use the proper wavelength of light for cancer treatment. The use of such a device will greatly improve the prospects of cancer survival.

The Important Thing Is Blood Oxygen

The work of Koch, Warberg and Olney proves beyond a doubt that in most, if not all, pathological conditions there is a marked Hypoxemia (Oxygen lack).

This is an extremely important factor in correcting any disease state.

The important thing is that Blood Oxygen saturation must be returned to normal, or above normal, as rapidly as possible if the patient is to be cured.

Hypoxemia or, as Olney called it, "blocked oxidation", followed by fermentation of sugar in cells, is the prime factor in malignant, virulance, bacterial, and allergic diseases. We believe, from the reports of the pioneers in ultraviolet irradiation therapy and bio-oxidative therapy, plus our experience, that photo-oxidation will become the treatment of choice for all Disease-Oxygenation is the key. **The process will be the major factor, in slowing the aging process."** - Dr William C. Douglass, MD, in "Into the Light: Tomorrow's Medicine Today", 1997.

Ultraviolet Deprivation

> *"**Ultraviolet Deprivation** must be considered as a possible adverse factor for cosmonauts on long-term flights. For this reason, the author reviews the literature pertaining to the biological effects of ultraviolet radiation. **Effects reviewed with consideration of the influence of wavelength and dosage include: Erythema, Bacteriocidal, Antirachitic, Facilitation of nonspecific immunity and resorption of inflammations, Acceleration of Histamine Production, Facilitation of Healing of infected muscles, and Damage to the Eyes."** - in "NASA Contractor Report 3922(07)", USSR Space Life Sciences Digest, Issue 6, June 1986.*

Chapter 8

The Importance of Hyperbaric Oxygen Therapy

Full Brain Regeneration by Hyperbaric Oxygen Therapy

In 2016, a 2 year old girl drowned in a pool at her home.

The girl was submerged between 5 to 15 minutes, her mother started CPR, in 10 minutes the Paramedics arrived, the girl organs where not working, and was dead on arrival at the hospital. After 100 minutes of continuous CPR, the girl was miraculously revived, but brain dead.

Medical Trade Doctors told her parents, that if she survives the next 48 hours, she would permanently be left in a vegetative state, with no brain activity, and no medical treatment available. Her parents immediately start to research an alternative, their research led them to Hyperbaric Oxygen Therapy (HBOT), which enhances the body's natural healing process by inhalation of 100% oxygen. Just after 40 Hyperbaric Oxygen Therapy (HBOT) sessions, the girl went from a vegetative state to being able to pulling herself to stand and taking some steps, all her speech returned, she became the first person (properly recorded) to regrow brain tissue, with her brain MRI as normal.

> ***"The little girl, whose Heart Didn't Beat on her own for 2 hours after drowning, showed Deep Grey Matter Injury, and Cerebral Atrophy with grey and white matter loss after the incident, and Could No Longer Speak, Walk, or Respond to voices. She was in the water for 15 Minutes before being discovered, and had experienced Cardiac Arrest, and while her mother immediately began CPR, Eden Wasn't successfully Resuscitated for 2 Hours, being eventually revived. Amazingly, Thanks to a Course of Oxygen Treatments – including Hyperbaric Oxygen Therapy (HBOT), Were Able to significantly Reverse the Brain Damage."*** *- in "Scientists Have Reversed Brain Damage in a 2-Year-Old Girl Who Drowned in a Swimming Pool", Science Alert, 19 July 2017.*

Blood Circulation is one of the most important functions of the body.

Without the Circulatory System, the Brain, Heart, and all other vital organs couldn't receive the Oxygen they need to function properly and survive.

Good Circulation keeps the Brain sharp, the Heart strong, and give complexion to the body.

The Brain, and the Heart aren't the only organs affected by Poor Circulation, a lack of Blood flow can affect any part of the body.

Hyperbaric Oxygen Therapy

Delays and Reverses the Ageing Process

“Recent research **“Cognitive Enhancement of Healthy older adults using Hyperbaric Oxygen”**, Aging, 15 July 2020, **found that when healthy adults over the age of 64 were placed in a pressurized chamber, and given pure Oxygen for 90 minutes a day, 5 days a week for 3 months, not only was the Ageing Process Delayed - It Was Actually Reversed.**

> ***“The Oxygen fluctuation we generated is what is important. We are not just slowing the decline, we are going backwards in time.”*** *- Prof. Shai Efrati, Tel Aviv University*

Some 35 adults over the age of 64 were involved in the study, and were administered Hyperbaric Oxygen Therapy (HBOT) utilising 100% Oxygen.

Repeated intermittent hyperoxic (increased Oxygen level), exposures induced many of the mediators and cellular mechanisms that are usually induced during hypoxia (decreased Oxygen levels); called the hyperoxic-hypoxic paradox.” - in “The Jerusalem Post”, 21 November 2020.

The Usefulness of Oxygen Therapy For Health and in Healing

“Hyperbaric Oxygen Therapy (HBOT); encourages the body's oxygen radical scavengers to seek out the problem molecules and let healing continue.

HBOT helps block the action of harmful bacteria and strengthens the body's immune system.

Hyperbaric Oxygen Therapy, is Used to Speed Up Healing of:

1. **Carbon Monoxide Poisoning.**
2. **Cyanide Poisoning.**
3. **Crush Injuries.**
4. **Gas Gangrene (a form of Gangrene in which gas collects in tissues).**
5. **Decompression Sickness.**
6. **Acute or Traumatic Reduced Blood Flow in the Arteries.**
7. **Compromised skin grafts and flaps.**
8. **Infection in a Bone (Osteomyelitis) that doesn't respond to other treatment.**
9. **Delayed Radiation Injury.**
10. **Flesh-eating Disease (Necrotizing Soft Tissue Infection).**
11. **Air or Gas Bubble Trapped in a Blood Vessel (Air or Gas Embolism).**
12. **Chronic infection called Actinomycosis.**
13. **Diabetic wounds that are not healing correctly.**
14. **Wounds that won't heal.**

It is Also Used for Infections in which Tissues Are Starved for Oxygen.

The goal of Hyperbaric Oxygen Therapy is to Fill the Blood with enough Oxygen To Repair Tissues, and Restore Normal Body Function.

With HBOT the Blood Carries the extra Oxygen Throughout the Body.

This Infuses the Injured Tissues that Need More Oxygen So They Can Start Healing.

HBOT: Helps Block the Action of Harmful Bacteria, and Strengthens the Body's Immune System.

HBOT: Can Disable the Toxins of Certain Bacteria.

It also increases Oxygen concentration in the tissues.

This helps them Resist Infection, and Improves the ability of white blood cells to find and destroy invaders.

HBOT: Encourages the Formation of New Collagen, and New Skin Cells.

It does so by encouraging new blood vessels to grow.

It also stimulates cells to make certain substances, like vascular endothelial growth factor.

These Attract and Stimulate Endothelial Cells Needed for Healing." - in "Hyperbaric Oxygen Therapy", Johns Hopkins University, 13 July 2019.

> ***"It cannot be disputed that cancer could be prevented if the respiration of the body cells would be kept intact. It Is The First Precondition of the Proposed Treatment that All Growing Body Cells be Saturated With Oxygen." - Dr Otto H. Warburg, MD, in "The Prime Cause and Prevention of Cancer",*** *August 1966.*

The Conditions That Oxygen Therapy Helps to Resolve

"Hyperbaric Oxygen Therapy helps treat the following:

1. **The Bends (Decompression Sickness).**
2. **Burns.**
3. **Hearing Loss.**
4. **Injuries that cut or break your skin (wounds).**
5. **Loss of Vision.**
6. **Severe Anemia.**
7. **Severe Bone and Skin Infections.**
8. **Skin Grafts.**
9. **Trauma from force or pressure on a body part (Crush Injury).**

Hyperbaric Oxygen is healthy.

It's pure Oxygen, which helps your immune system Fight Bacteria; and Generate Stem Cells.

Stem cells are special cells in your body that help create other types of important cells, including blood cells, brain cells and muscle cells.

Contraindications

Some People Shouldn't receive Hyperbaric Oxygen Therapy; It May be Dangerous if they have:

1. Collapsed Lung (Pneumothorax).
2. Lung Disease (that may increase your risk of getting a collapsed lung); including Chronic Obstructive Pulmonary Disease, Cystic Fibrosis, and Emphysema.
3. Fever, or Cold.
4. Recent Ear Injury.
5. Recent Ear Surgery.

Room Air contains 21% Oxygen; while Hyperbaric Oxygen Therapy provides you with air that contains 100% Oxygen. A pressurized chamber delivers Oxygen that's 2 to 3 times higher than normal air pressure, which helps your lungs gather and absorb more Oxygen. Oxygen helps the tissues in your body heal, and withstand infections." - in "Hyperbaric Oxygen Therapy", Cleveland Clinic, 1 July 2023.

Conditions Treated with Hyperbaric Oxygen Therapy

"Conditions approved by the U.S. Food and Drug Administration, and the Undersea and Hyperbaric Medicine Society for Hyperbaric Oxygen Therapy:

1. Urinary or Rectal Bleeding, as well as Non-Healing Wounds.
2. Chronic Diabetic Foot Ulcers.
3. Chronic Bone Infections.
4. Aseptic Osteonecrosis (Bone Necrosis tissue due to a lack of blood supply).
5. Skin grafts, or flaps that aren't properly healing.
6. Acute Ischemia (which involves any condition that stops blood flow, such as traumatic wound injuries, crush injuries).
7. Sudden Blindness or partial loss of vision due to central retinal artery occlusion
8. Sudden Hearing Loss.
9. Gas Gangrene.
10. Necrotizing soft-tissue Infection (often from flesh-eating bacteria).
11. Intracranial Abscess.
12. Carbon Monoxide Poisoning
13. Gas Embolisms (where air gets trapped in blood vessels and tissues, such as when scuba divers surface too quickly from deep water)." - in " Hyperbaric healing: The power of precise Oxygen Therapy", University of Texas Southwestern Medical Center, 14 November 2024.

High Levels of Oxygen Benefit Healing

"We have forgotten that the Oxygen we gain from Breathing, not only allows us to Function, It Is The Key To Our Recovery from Injury or Disease.

When we have a Stroke, our Brain is starved of Oxygen, causing the catastrophic death of those Nerve Cells, and leaving us paralysed and unable to speak. Yet within days, the same patients start to regain movement and the ability to speak. This is not a sign of nerves coming back to life, but **the brain rebuilding itself, creating new nerve connections and bypassing the damaged areas.**

Brain imaging has shown that Nerve Cells may become dormant and can be revived after injury, but it depends on sufficient Oxygen being available.

There has been a second important discovery relating to **brain repair; the stem cells that form the brain as we grow in the womb are still present in our brains as adults and they retain the ability to grow new nerve cells.**

The Mistaken Belief that Everything Will Eventually be Cured by a Pill, is a Delusion no longer shared by the executives of Pharmaceutical Companies.

It was reported on the programme "Today", Radio 4, BBC, in February 2011, by Professor David Nutt, and Professor Douglas Kell, that the multinational Drug Companies Pfizer, Glaxo SmithKline, and Astra Zeneca had closed their Neuroscience Divisions. Ironically, they referred to it as "the last nail in the coffin."

> *"The sheer financial scope of* ***failures of neuro-leads in late-stage pipelines has made Central Nervous System (CNS) Drug development a literal brain drain.***
>
> *No wonder Big Pharma seems to be* ***turning its back on CNS drugs.***
>
> ***Since 2011: GSK, AstraZeneca and Novartis have announced closures of Neuroscience Divisions globally. Pfizer, Sanofi, Janssen and Merck have begun to significantly downsize CNS operations.*** *Lilly and Pfizer were not the only Drug developers to be plagued by CNS pipeline disasters. Baxter's Alzheimer's lead Gammagard failed to slow disease progression in Phase III Alzheimer's trials in July 2013.*
>
> ***Biotech Satori Pharma completely shut down operations after a disastrous trial performance of its lead Alzheimer Disease compound SPI-1865 in May 2013."***

The evidence that High Levels of Oxygen Benefit Healing has been published in many thousands of papers over the last hundred years.

The most complex blood vessels in the body are those that supply the brain, because **they form a crucial barrier between blood and the delicate cells of the nervous system.**

Until recently, the blood-brain barrier has had little attention in neurology, although the first question asked in **Pharmaceutical Companies about a new drug is whether it crosses the blood-brain barrier.** We shall see that understanding **the blood-brain barrier is vital to finding effective treatment for several conditions that affect the nervous system, and the barrier is, in fact, damaged in the commonest disease of the brain, and spinal cord, multiple sclerosis.**

When, after damage, the blood-brain barrier does not recover, the escape of Toxic Components from blood into sensitive nerve tissue may cause damage, and in patients with multiple sclerosis, the progression of disability.

The brain has a second circulation involving the colourless liquid known as Cerebrospinal Fluid.

The constituents of Cerebrospinal Fluid are very tightly controlled, ensuring a very constant chemical environment to allow the cells of the brain to function properly. The complexity of the blood-brain barrier defies belief and its relationship to disease.

Contrary to popular belief, the first response of the body to lack of oxygen is not to increase the rate of breathing, it is the pulse rate that increases together with the output of blood by the heart." - in "Oxygen and the Brain: The Journey of Our Lifetime", 2014.

Promoting Formation of New Blood Vessels

Hyperbaric Oxygen Therapy (HBOT) increases delivery of Oxygen to the body, this Improves Circulation by increasing Oxygen levels in the Blood, and Promoting the Formation of New Blood Vessels. It is particularly beneficial for conditions where circulation is compromised, such as: peripheral artery disease, wounds, and other conditions where tissues are not receiving adequate Oxygen.

"Neovascularization is another critical aspect of Hyperbaric Oxygen Therapy.

Angiogenesis depends on the fibroblast's secretory function, which creates a matrix that capillary buds can invade. **An essential component of this process is a gradient of well-oxygenated to near-anoxic tissues.**

Vascular Endothelial Growth Factor (VEGF) is the primary growth factor responsible for **initiating the processes leading to new blood vessel formation.**

VEGF is induced by Oxygen, and increases with higher Oxygen tensions.

Hyperbaric Oxygen Therapy Improves Red Blood Cell (RBC) elasticity, and reduces platelet aggregation. Additionally, the plasma's ability to carry dissolved Oxygen to areas that RBCs cannot reach; contributes to better Oxygenation of hypoxic tissues in various circulatory disorders.

Clinical Applications of Hyperbaric Oxygen Therapy, where vasoconstriction Improves Outcomes, include:

1. **Crush Injuries.**
2. **Gas Gangrene.**
3. **Compartment Syndromes.**
4. **Threatened Flaps and Grafts.**
5. **Burns.**
6. **Decompression Sickness.**
7. **Several off-label uses.**

HBOT-induced angiogenesis has several clinical applications.

Wound Healing Depends on Adequate Blood Flow and Oxygen supply, but certain wounds, such as; diabetic ulcers and radiation-damaged tissues, often have impaired circulation, hindering the healing process.

Hyperbaric Oxygen Therapy; Increases Oxygen access to damaged tissue through plasma saturation, and also stimulates new blood vessel formation by activating transcription factors like Vascular Endothelial Growth Factor.

Additionally, HBOT-induced angiogenesis and fibroplasia have been shown to promote healing in radiated tissue.

Hyperbaric Oxygen Therapy is also a valuable adjunct in treating acute blood loss anemia.

Hyperbaric Oxygen Therapy is also used as an adjunctive treatment for peripheral vascular disease through several mechanisms.

Hyperbaric Oxygen enhances Oxygen Supply to Ischemic [a less-than-normal amount or restriction in blood supply to any tissue, muscle group, or organ of the body, causing a shortage of oxygen that is needed for cellular metabolism]**, or** [when oxygen is insufficient] **Hypoxic Tissues with marginal perfusion and improves cellular metabolism impaired by hypoxia.**

Hyperbaric Oxygen Therapy alleviates ischemic effects by promoting angiogenesis and healing.

HBOT improves cardiovascular outcomes through various mechanisms.

HBOT reduces inflammation by upregulating protective enzymes like superoxide dismutase and catalase.

These enzymes are activated by an increased adaptive antioxidant response, which is driven by a regulated increase in reactive oxygen and nitrogen species.

A recent animal study demonstrated that a short course of Hyperbaric Oxygen Therapy Improves Cardiac Function." - in "Hyperbaric Cardiovascular Effects", StatPearls, 2025.

Electro-Stimulation and Electroceuticals

> ***"There is a strong relationship between the Electrical and Molecular layers of the Brain.***
>
> ***Molecular changes are likely to cause changes in the firing patterns of neurons. Meanwhile, physically exciting or suppressing the electrical activity of neurons results in changes to synaptic neurotransmission of various molecules.***
>
> ***Electric brain stimulation is an up-and-coming practice which offers more precision and less side-effects in the treatment of disorders whose location in the brain we have been able to elucidate."*** *- in "Drug Discovery World", Fall 2013.*

Oxygen Is The Most Vital to the Body

"Of All The Chemical Elements: Oxygen Is The Most Vital to the Human Body.

The Brain Is The Most Sensitive Organ to Oxygen deprivation (hypoxia), which, over an extended period, can cause:

1. **Coma.**
2. **Seizures.**
3. **Cognitive Impairment.**
4. **Neurological Disabilities.**
5. **Brain Death.**

However, during mild hypoxia of short duration, the brain develops adaptative mechanisms that allow it to maintain normal physiological conditions.

Maintenance of normal brain function depends on a continuous supply of Oxygen, so it is crucial for the body to be able to detect and respond rapidly to hypoxia. (Hypoxia is a state of deficiency of available Oxygen in the blood and bodily tissues). It is closely related to anoxia, which is a complete lack of Oxygen in the tissues. Certainly, there is considerable heterogeneity in Oxygen levels within the body (21% O2 in the atmosphere, 14% O2 in the alveolar air, 12% O2 in the arterial blood and 5.3% O2 in venous blood),with a mean of 3% O2 in tissues.

Oxygen sensing is crucial for Cell Survival, and for a living organism's ability to adapt to changing environments or physiological conditions.

Oxygen sensing mechanisms have been implicated in many pathophysiological conditions, including:

1. **Stroke**
2. **Cancer**
3. **Hypertension**
4. **Sleep Apnoea**
5. **Heart Failure.**

Hypoxia can be caused by a reduction in partial pressure of Oxygen, inadequate Oxygen transport or the inability of the tissues to use oxygen.

As a main consumer of energy, the Brain is Particularly Susceptible to the Effects of Hypoxia." - in "HIF1 and Oxygen sensing in the Brain", Nature Reviews Neuroscience, July 2004.

Concerning the State of Multiple Sclerosis

Oxygen, On Its Own, Cannot Bring About A Cure. So, in other words: The Condition (not a disease) of Multiple Sclerosis, is Not A Lack of Oxygen, for indeed, True Multiple Sclerosis, in its origin, it is found to be from; For "Life Is A Continuation." Thus The Treatment for the condition known as Multiple Sclerosis, Is Provided by the Hospitallers Order of the Good News.

For Only when the Mental Attitude of the body, is that, that may with the holding of same bring responses to the physical forces, then, we may give that which we find will be helpful to the body. With care and consistency, and with being hopeful, prayerfully consistent, we may bring conditions that will be much improved to any present conditions. In thine own self, and in thine own mind, in thine own body; to the true spirit of love, that creative influence that is worshiped by man as God, the prayer then:

> ***"The physical conditions that have come upon me are those most necessary for my own soul's development."***

And these then, can quicken that which will make for thine own self, thine own body, thine own mind, being and manifesting that same influence in the lives of those that thou may meet, that thou may contact day by day. Yea, they may bring to thee, with thine own inspiration, thine Own intuitive forces, by applying them in thine own experience, such creative influences, such creative energies, as to Renew thy strength. For His promises have been given:

> ***"Those that love me will I renew, even as the strength of the unicorn, as the flight of the eagle, and thy days and thy habitation shall be called blessed by those that know thee." - Isaiah 40:31 - Rectified Bible***

Then, use those influences in the material world. For All force, all power that is manifested in a material world: can, and only does come from that universal force, that creative energy we worship as God; that which we may renew in its proper associations, its proper activities and relations to self, that which not only builds a physical body, that builds a strong determination for a usefulness in thine own mental body, but makes for that beauty in the soul development, that will bear thee up in thy periods of destructive influences that come.

The shadows, and thy fears that make men afraid will be cast away, for: "If ye will be my children, I will be your God." Has been the promise to all.

And, "I will bear thee up lest at any time ye dash your foot against a stone."

Then, in making application, my son, of these things in thine own experience, approach them not with fear and trembling; rather as that which is thy birthright. "Seek and ye shall find; knock and it shall be opened unto you."

For This day there is set in thine own experience that which, if thou will apply in thine own material body, thine own material experience, will Renew

thee even as His promises have been.Thus in the physical body, it is necessary for the adding to same in such measures, in such a way and manner that we may bring to the nerve tendons, to the lymph and blood circulation, that which will carry into and through the locomotories of the body the abilities in the centers for that strength, which will make those portions in the lumbar and sacral areas, in the heart's action, in all the activities of the body, able to Renew their strength.

Emunctology: is in itself of the scientific nature; in part dealing with the Emotions and the Mental Attitudes, and Aptitudes of individual activity, yet, it is capable in Affecting groups, and the masses, it serves, of its teachings; to allow for the analysing of the emotions, and the activities in those things pertaining to the relationships of applications of emotional natures that may be made as an application to the physical welfare of individuals.

In the development in those fields of activity pertaining to the relationships, and actions necessary for the application of things to the Body-Functionings of individuals. The Order, in its expression of service through Emunctology, allows for the soul forces, a way, a manner, in which each may minister in such ways measures and manners, that may not only bring material remuneration for the physical activities and associations of the body but will make for a mental, physical, material, and spiritual development that should be Most satisfying.

For Emunctology, offers that opportunity for the greater expansion in the abilities of self to be of service to its fellow man; also the greater opportunity for the expansion in those relationships of individuals in such measures, and manners as to bring contentment. These only lend the very opportunity for the self to become more absorbed in the greater opportunity, and chance for application of the abilities in self. Through these channels there is offered the opportunity to make self, as it were, one indispensable in the experiences of individuals whom the entity may contact in these environs.

Yes, it is in keeping with that which We find would make for the greater opportunities to apply self as a life's work in these directions.

By applying not only the mental and material things but also the deeper things. Not to become goody-goody, no.

Not to become one as a Quaker or Shaker; neither be one that is a jerker, nor a shirker; but one that would apply self in the mental, in the material, and in the Spiritual opportunities, as presenting to each individual. For when there are those applications by those that would heal the bodies, who would make the outlook upon life the greater in those directions where there might be more comfort and more ease, unless the basis for those things is in the spiritual, they must, as ever, become as naught! But apply self in such a way that each life contacted is not only better, but desires within itself to apply self for a greater service to its fellow man, that its presentations and appreciations of life itself may be the better manifested and applied in its activities throughout the earth.

In these channels, and in this way, may an individual apply self; studying all phases of those things that may be applied to the physical, the mental and, most

necessary of all the Spiritual; for the spiritual foods are necessary.

Be not impatient, but work and pray, work and think, and not only of self, but as to how that self may be of a greater help and aid to its fellow man in all phases, and activities that may present themselves through these varied relationships that are brought about by the environs. Not only being good, and apply same in individuals lives, but: good For Something!

Oxygen Absence Promotes a Survival State in Cancer Cells

"During the last century, it has been established that regions within solid tumors experience mild to severe Oxygen deprivation, due to aberrant vascular function. These hypoxic regions are associated with altered cellular metabolism. Oxygen (O2) is required for aerobic metabolism to maintain intracellular bioenergetics and serve as an electron acceptor in many organic and inorganic reactions. Hypoxia, defined as reduced O2 levels, occurs in a variety of pathological conditions, including stroke, tissue ischemia, inflammation, and the growth of solid tumors.

Early Demonstrations of Tumor Hypoxia

Before hypoxic cells could be visualized in tumors, their presence was inferred by some astute observations. In 1955, Thomlinson and Gray studied histology sections of human lung tumors and observed cells growing in "cords" running parallel to vascularized stroma. In large cords, they noted a necrotic core surrounded by a region of viable cells neighboring a capillary vessel. **They proposed that necrosis was due to insufficient O2, and nutrient supply to the rapidly expanding tissue.** Regardless of cord size, detectable bands of live cancer cells lying between the necrotic core and the surrounding stroma were consistently 170 microns in width, approximately the calculated distance of O2 diffusion (145 microns). **They proposed that the edges of such necrotic cores harbor viable hypoxic tumor cells. Other human tumors, such as cervical and renal carcinomas exhibited similar histological characteristics, suggesting that this was not unique to the lung**.

The Role of Hypoxia-Inducible Factors in Cancer

Based on the analysis of human cancer biopsies and experimental animal models, it has become increasingly clear that hypoxia-inducible factors play a critical role in cancer progression. Gray made the direct connection between tissue oxygenation and tumor cell, a principle known as the "O2 enhancement effect".

Experiments conducted by Richard Hodgkiss and colleagues in the late 1980s demonstrated that the oxygen effect required O2 to be present, leading to the “oxygen fixation” hypothesis. **Hypoxia is commonly observed in inflammatory states.”** - in “The impact of O2 availability on human cancer”, Nat. Rev. Cancer, December 2008.

> ***“Hypoxia (when oxygen levels in a tissue are low), is a feature of cancer, and often indicates that cancer is growing aggressively. Hypoxia stimulates the growth of blood vessels within tumours, which can fuel the spread of cancer cells to other parts of the body.”*** *- in “Nobel Prize for Medicine 2019: Oxygen sensing in cancer”, The Institute of Cancer Research, 17 October 2019.*

The Discoveries of How Cells Sense and Adapt to Oxygen Availability

“The mechanism for one of life’s most essential adaptive processes.

They established the basis for our understanding of how oxygen levels affect cellular metabolism and physiological function. Their discoveries have also paved the way for promising new strategies to fight anemia, cancer and many other diseases.

Oxygen At Center Stage

Oxygen, with the formula O2, makes up about 20% of Earth’s Atmosphere.

Oxygen Is Essential for animal life: it is used by the mitochondria present in virtually all animal cells in order to convert food into useful energy.

Otto Warburg, the recipient of the 1931 Nobel Prize in Physiology or Medicine, revealed that this conversion is an enzymatic process.

During evolution, mechanisms developed to ensure a sufficient supply of Oxygen to tissues and cells. The carotid body, adjacent to large blood vessels on both sides of the neck, contains specialized cells that sense the Blood’s Oxygen levels. The 1938 Nobel Prize in Physiology or Medicine to Corneille Heymans awarded discoveries showing how **blood oxygen sensing via the carotid body controls our respiratory rate by communicating directly with the brain.**

Hypoxia-Inducible Factor Enters the Scene

In addition to the carotid body-controlled rapid adaptation to low oxygen levels (hypoxia), there are other fundamental physiological adaptations.

A key physiological response to hypoxia is the rise in levels of the hormone erythropoietin (EPO), which leads to increased production of red blood cells (erythropoiesis).

The importance of hormonal control of erythropoiesis was already known at the beginning of the 20th century.” - in “2019 Nobel Prize in Physiology or Medicine”, The Nobel Assembly at Karolinska Institutet, 7 October 2019

Cancer And Hypoxia

"Hypoxia is a critical hallmark of solid tumors and involves enhanced cell survival, angiogenesis, glycolytic metabolism, and metastasis.

Hyperbaric Oxygen Treatment has for centuries been used to improve or cure disorders involving hypoxia and ischemia, by enhancing the amount of dissolved oxygen in the plasma and thereby increasing O2 delivery to the tissue. Solid tumors often contain areas subjected to acute or chronic hypoxia, though with variable severity in patients both within and among different tumor types. Studies have Demonstrated that Hypoxia Is Implicated in the Resistance to conventional therapy. The epithelial-to-mesenchymal transition in cancer, has been shown to be Induced by Hypoxic Conditions, Leading To Cancers with an invasive or metastatic phenotype. Hyperbaric Oxygen can be used to overcome hypoxia. Hyperbaric Oxygen is based on administration of 100 % Oxygen at higher than normal atmospheric pressure. Hyperbaric Oxygen Treatment Enhances the Amount of dissolved Oxygen in the Plasma, thereby increasing O2 tissue delivery independent of hemoglobin. As in normal tissue, the partial pressure of Oxygen (pO2) in cancer tissue increases significantly during Hyperbaric Oxygen exposure. Hyperbaric Oxygen Therapy is today accepted and routinely used for many disorders, related to both ischemia and/or hypoxia.

Oxygen And Wound Healing

Oxygen Is Required For All Major Processes Involved in Wound Healing; including resistance to infection, activation of fibroblasts, collagen deposition, angiogenesis, and epithelization.

Oxygen And Cancer

Research studies have shown that Hyperbaric Oxygen can be Inhibitory; And Reduce Cancer Growth in some cancer types, like Breast Cancer." - in "Hyperbaric Oxygen Therapy and Cancer, a review", Target Oncol., December 2012.

Oxygen In The Body System

Energy inside cells comes in the form of Adenosine Triphosphate (ATP), a molecule that carries energy within cells. **Oxygen's Main Function in the body is to enable aerobic respiration, the process that generates the vast majority of a cell's energy in the form of Adenosine Triphosphate.** This energy is essential for all bodily functions, from muscle movement to thinking and digestion.

Oxygen is the final electron acceptor in the mitochondria during cellular respiration, and without it, cells cannot efficiently break down fuel (like glucose) to produce the energy needed for survival

Most Conditions that Disturb the Physical Functioning, such as those indications of a Trembly Feeling, Are From Distresses, From Pressures That Are Produced In The Circulations.

These can be aided, if taken those properties for loosening oxygen in the system, for the clarifying of the blood stream.

Also it taken, Carbon Ash loosens Oxygen in the System, that allows the Blood supply to be clarified the better.

This will combine most in the system as a resistance by the releasing of Oxygen in the system, with that of the Ultra-Violet is better in the Blood, and the releasing of same.

With the Ash, with the electrical reactions for same, the Ultra Violet Ray, for this loosens the Oxygen in the system in such a manner as to create more of that Ossification in System Necessary for Bone Structure.

Method as being taken, those of the Animated or activated Ash, 1/8 grain taken about 30 to 45 minutes before the ultra-violet light is given.

Do not give the light too strong, nor too close to the body, and the body should Not be Reclining when given; Rather that of the erect position, and this applied to the Cerebro-Spinal, rather than to the chest.

This will allow the activity of more Oxygen in the system.

The use of more Oxygen in the system, which may be taken through the oxygen tanks, or Hyperbaric Oxygen Therapy, as well as the releasing of same by taking the animated ash with the addition of the ultra-violet over those portions of the system, not direct on the incision or injured portions themselves, but rather from where the supply of blood is governed by the ganglia of the nerve system that carry it in its circulation through the portion.

For physical healing, wherever there may be plenty of Oxygen as may be created for the system, this is helpful.

Toxaemia And How It Affects Oxygen Levels in the Body

When a Body is in a state of Toxaemia, it produces very bad circulation upon the activity of all the organs of the system; including the throat, bronchi and larynx. The lung becomes involved through the lack of the blood flow sufficient to make for a fullness through same. Thus we may have only a half breath, or not more than 66% of the lung area expanding to the breathing. This naturally makes for the inclination towards lack of the oxidization, or sufficient Oxygen in the system. These make for again, the lack of the ability of the blood supply to cleanse itself; hence making for a reaction upon the whole of the hepatic circulation, producing toxic forces and poisons; combined with the lack of the proper circulation and coagulation. Hence these can cause those indications of the hot and cold sensations. Even when a body may be perspiring freely, in portions there will be those inclinations or feelings of lack of proper circulation, and the liver, the spleen, the pancreas all become somewhat involved.

Neuropathic Manipulation, Ultra Violet, Vibration

Manipulation Neuropathicaly Given, would be well to be given often (every other day). All of these may be given at Once, or one following the other.

Taking the vibratory forces last, to be sure.

The ultra violet, the Manipulation Neuropathicaly Given (that is, the Massage), thus beginning with the extremities (on the hands, on the toes), and working toward the body, Thoroughly, all along the lines, not only of the main nerve centers, but along the trunk lines, also of nerves in arms, shoulders, neck, head, body, limbs, All, work Toward the body. Not away From.

For Massages for limbs and body, will bring better conditions, if all work together. With the manipulations, allow for the precautions as to the Diet (Health Food Choices), and with the activity of the body more in the open, for these all work together to relieve the body. The loosening of Oxygen in the system throughout, purifies the blood in the system, and the manipulations give the proper coordination for Eliminations In the system, without causing distress in Any One direction, or without causing disorders from the refuse being thrown in the system. Once a week, or twice a month, have a General Massage Osteopathically given, these, with those things as has been given as the Diet, to make an even balance in the system, will bring about the more active, and the faster recuperations for the body.

Take first, through the system, plenty of Oxygen in the system.

Fresh Air from the outside, either by taking from the condition, or from those of pleasant scenes and surroundings and of a rarified condition of the air, or those conditions produced by manipulation of the muscular forces of the body by the limbs, by exercise, as much with the air as possible, all times, keeping the body warm. Stimulation by electrical forces to the nerves supply, at the solar plexus center, at the 9th dorsal, from those of low origin of electric force, or by those produced by manipulation of the hands or the heat from the hands produced to the same.

The Spinal Cord in Disease Processes

"The spinal cord; acts as an organizer, not only of normal adaptive behaviour, but also of disease processes. Spinal Cord segmental relationships are not the basis for normal neurophysiologic function or activity but are prominent in clinical practice. Examples are situations in which tissues and organs may be disturbed by each other through shared nerves and cord levels.

The injurious factors that may invoke segmental facilitation, other than direct trauma to the spinal cord, are disturbances in afferent input from the musculoskeletal system or the viscera and/or physicochemical disturbances in neuronal excitation and conduction. Some of the consequences of these disturbances are described.

Osteopathy attributes adequate significance to the role of the spinal cord as an organizer of disease processes.

Spinal Cord: Information and Command Center

The spinal cord is the origin of most of the innervation of the body. It is that portion of the central nervous system where, by far, most of the nerves originate. Indeed, every tissue and organ of the body receives some kind of innervation from the spinal cord.

The spinal cord is the site of entry, via the dorsal roots, of most of the "information" about the body itself. It is in the cord that impulses from most of the tissues of the body receive their first screening, gating, arranging, and routing for transmission elsewhere, including the brain. As the site of origin of the "final common path", the spinal cord is also the final command center.

Orders that are issued, consciously or unconsciously, in the higher centers, for most of the motor activity of the body, are issued to the spinal cord, which recodes them, so to speak, and then composes and dispatches the actual orders to the muscles, innervated by motoneurons, and to other tissues and organs, innervated by the autonomic nervous system. The latter includes blood vessels, viscera, sweat glands, et cetera, innervated by the sympathetic nervous system, which has its entire origin in the spinal cord, as well as those visceral structures that receive their innervation from the sacral portion of the parasympathetic division of the autonomic nervous system. For the moment, our concern will be with the activity of the skeletal musculature. In a sense, therefore, the spinal cord is the keyboard on which the brain plays when it calls for activity or for change in activity. But each "key" in the console sounds, not an individual "tone", such as the contraction of a particular group of muscle fibers, but a whole "melody" of activity, even a "symphony" of motion. In other words, built into the cord is a large repertoire of patterns of activity, each involving the complex, harmonious, delicately balanced orchestration of the contractions and relaxations of many muscles. The brain "thinks" in terms of whole motions, not individual muscles. It calls, selectively, for the preprogrammed patterns in the cord and brainstem, modifying them in countless ways and combining them in an infinite variety of still more complex patterns.

Each activity is also subject to further modulation, refinement, and adjustment by the afferent feedback continually streaming in from the participating muscles, tendons, and joints.

Our concern until now has been with muscles and motor activity, but it is important to recall that the spinal cord is the site of origin also of the Sympathetic Nervous System. This anatomic intimacy between the sympathetic division of the Autonomic Nervous System, and the Somatic Nervous System is most appropriate, since it is one of the main functions of the Sympathetic Nervous System, continually to tune visceral, metabolic, and circulatory activity to the rapidly changing requirements of the skeletal musculature.

Every motor activity, organized via the somatic innervation originating in the spinal cord, also involves the simultaneous, coordinated activity of the Sympathetic Nervous System and the tissues and processes regulated by it. "Spinal patterns", therefore, must be viewed not merely as motor reflex patterns but as somatosympathetic patterns.

Myths and Misconceptions

Among the most persistent myths is that the 2 divisions of the Autonomic Nervous System:

1. The Sympathetic,
2. The Parasympathetic;

Are equal and opposite moieties, one being inhibitory where the other is excitatory, one positive, the other negative.

The implication usually conveyed is that normal life is a nicely balanced tug-of-war between these two divisions, and that it is the physician's function to redress "autonomic imbalance", usually with appropriately -lytic or -mimetic medications.

Although this view is widely held by physicians (and others), it will be shown that the 2 divisions are vastly different systems.

Indeed, only one of them, the sympathetic, can truly be called a system.

They differ in their basic design, central origins, peripheral distributions (overlapping though it is), and the sensory stimuli to which they respond." - Dr Korr, Professor, in "Journal AOA" September 1976; "The spinal cord as organizer of disease processes: The peripheral autonomic nervous system", 1979.

Note: **Dr Korr, uses musical analogy for the role of the sympathetic system in "tuning visceral, circulatory, and metabolic activity", necessary for systemic coordination. Extending musical metaphor to the entire Spinal Cord which is the "keyboard on which the brain plays when it calls for activity."**

The vibratory cascade results in a "symphony of motion" – a "complex, harmonious, delicately balanced orchestration."

> ***"Nothing seems too hard, too great, or too difficult for prayer to do. It has obtained things that seemed impossible and out of reach. It has won victories over fire, air, earth and water. Prayer has raised the sick. Prayer has raised the dead. Prayer has procured the salvation of souls."*** *- John Charles Ryle, Anglican bishop of Liverpool, in "A Call to Prayer, 1869.*

The Immune System Runs on Oxygen

"Ed McCabe holds a degree in Educational Media, from the University of Massachusetts, is a leading international author, lecturer of Oxygen and Ozone Therapies. His ongoing involvement with advanced healing modalities encompasses a span of over 25 years. As a journalist, he solely focused upon studying Oxygen Therapies during 12 years of intensive investigation, research and experimentation. He is the first and only one to create a modern mass public awareness of the existence and benefits of Oxygen and took and Ozone Therapies.

One milestone in his career was when, along with Senator Tom Harkin, and former Congressman Bedell organized and brought former "AIDS" patients and their doctors to the top levels of the National Institute of Health.

The Patients Had Become Healthy by Using Oxygen Therapy

> ***"After all your immune system runs on Oxygen, and disease causing microbes like most of the bacteria cannot live in."*** *- Ed McCabe*

His Book "Oxygen Therapies, A New Way of Approaching Disease", 1988, was the first book to detail every known therapy that used **Oxygen to eliminate disease and restore health by ridding the body of toxins and microbes, while simultaneously boosting the immune system.**

> ***"We can do anything unless we believe we can: Consciousness Is Everything. Most importantly, in the healing area, I discovered that there is a triad of concerns that need to be balanced before real long term healing can be effected: Mental, Spiritual, Physical, Emotional. Above and beyond these areas, as if you are looking down on the top of a pyramid, The Spiritual is the invisible thread that ties them all together yet remains apart from their dualistic natures. For us to be in harmony, all four need to be faced, examined, and balanced. You won't be healthy long if you abuse your body in the areas of food, drugs, rest, breath, or exercise, or if you give in to excessive anger, lust, greed, attachment, or vanity. You also won't be healthy long if you dwell upon thinking badly about yourself or others, or deliberately, somehow, reduce or abberate your incoming and outgoing flow of the Life Force. If you do these things, whether by conscious choice or not, disease and suffering follow. If not right away, then eventually, as it is Nature's way of getting you to wake up and see how you are Being, as part of the Whole.***

My Oxygenation Experiences

> ***The first thing that happened was that my intestines emptied accumulated waste-matter heavily for 3 days. A week went by and then I started coughing and***

expectorating. This lasted for about 2 months. This is what happened to me: First, my intestines started dumping out toxins, much like a Colonic, or Enema. This could have included many forms of freshly expired anaerobic bacteria. Then the individual body cells began to be oxygenated, dumping out their own accumulated toxins. My metabolic rate increased to the point of fever, to burn up these toxins for elimination. Then the extra oxygen released into my bloodstream started to bubble out of the blood in the air/blood exchange area of my lung bronchial sacs. This happened underneath the coatings of accumulated toxins left over from my many bouts of childhood bronchitis. The layers loosened, and as they broke up, I expelled them. Other people have had other cleansing reactions such as rashes, or none at all, depending on how clean their cells were when they started. I have since found out that I could have avoided some of the unpleasant reactions by first Cleansing my Colon. I believe the reactions were all beneficial, because I have not been sick since. I used to get the flu and colds constantly. I also Cleaned out my Colon. Here are my "side effects" or results, since the cleansing, they're given to you with my intuitive subjective conclusions: So far, I have not had a cold or flu in over 2 years, where I used to be sick approximately 4 times a year. I also have fewer and lesser allergic reactions now, my hay fever has stopped." *- Ed McCabe, in "Oxygen Therapies, A New Way of Approaching Disease", 1988.*

The Medical Trade Imprisoned Ed McCabe

In 1998 Ed McCabe's was sudden Imprisoned for 18 months.

His house was raided, and his computer, books, and research files taken, through the use of warrants that were "sealed."

Ed was sent to live with criminally insane prisoners in a Federal Mental Hospital for 1 month, of punishment as an "evaluation."

He dared to question in Court what they were illegally doing to him.

He went through 11 other prisons.

For a total of 18 days, he was locked in leg, arm and waist chains.

Despite not breaking any regulations, was locked in solitary confinement, and cut off from all human contact on 5 separate occasions, for a total of 2 months, 4 of them before going to trial.

A Federal Binghampton, New York Judge, a Syracuse NY Magistrate, an Asst. United States Attorney, and 2 IRS Agents were actors to imprison Ed.

There was no valid Grand Jury vote. The court transcript has lies in it.

They allege they convicted Ed, and have records allegedly proving it; but all their paperwork was concocted using the ruse of actually convicting a fictitious person with an assumed fictitious name for non-liable and non-existent tax violations. Then they put Ed in prison." - in "The Ed McCabe Story, How a Regular Guy Became "Mr Oxygen", Flood Your Body with Oxygen", 1988.

Chapter 9

Concerning Trauma: A Major Factor in The Causation of Disease

"The subject of the Etiological Relationship Between Trauma and Disease, though Always Recognized, Has Not Been Given the Attention which its Importance Merits.

The Role of Trauma Is Unquestionably Overestimated by the lay public.

Other Diseases can be Caused, or Accelerated by Trauma.

The purpose of this symposium is to present The Accumulated Knowledge Concerning the Relationship of a Single Trauma to Disease.

With Few Exceptions, There is No One Exclusive Cause of a Disease.

Several Factors, in Varying Combinations, Usually Constitute the Conditions Under which a Disease Develops.

One of the Factors may be constant — e.g., the specific organism in an infectious process. But this constant specific Factor, Acting Alone, Does Not Always Produce its Disease. The Tissues Must be Prepared to Permit the Development and Growth of the Organism.

A Transient Bacteriemia Often Occurs Without Ill Effects; Only When the Bacteria circulating in the Blood light on devitalized or weakened tissue, do they multiply and produce the infectious disease.

The Secondary, inconstant factor (the lessened resistance of the tissues), May Be as Important as is the Bacterium itself.

The Role of Trauma in the Etiology of Disease Is Similar To That of Any Other Secondary, inconstant non-specific Factor.

A consideration of the Role that Malnutrition Plays in the Production of Disease strikingly illustrates this similarity.

Malnutrition is the direct cause of certain diseases: Scurvy, Rickets, Beriberi.

It is a Secondary Factor in causing certain other conditions, notably Pulmonary Tuberculosis. It is a Factor in this Disease, although many cases of tuberculosis develop without it, and although most undernourished people do not develop tuberculosis. Trauma, as a Factor in the Causation of Disease, should be studied in the same way as Malnutrition.

Much has been learned during the last several decades; much still remains obscure. Certain diseases in which trauma was believed to play a part are now known to be entirely unrelated to it. Certain other conditions are now known to be caused by trauma: a skin burn can produce a duodenal ulcer; a cerebral concussion, from which the patient apparently recovered within an hour, can produce an apoplexy some time later; and a back injury, with negative roentgen-rays 6 days after the accident, may be the cause of a compression of the body of a vertebra found 6 months later." - in "Trauma and Disease", 1941.

"Therapists of various clinical disciplines are now becoming increasingly aware that traumatic disorders involve severe dysregulations of both mind and body. The idea that Many Diseases of Unknown Cause; Are Actually Due to Trauma is not new. But is is surprising to learn that Trauma can be the cause of so many familiar physical disorders. Dr Scaer begins with the:

1. *Whiplash Syndrome.*
2. *Chronic Pain Syndromes.*
3. *Phantom Pain.*
4. *Irritable Bowel Syndrome.*
5. *Cystitis.*
6. *Fibromyalgia.*
7. *Chronic Fatigue Syndrome.*
8. *Reflex Sympathetic Dystrophy.*
9. *Autoimmune Diseases.*

The most surprising and novel idea is his finding that an instinctual freeze reaction to a traumatic experience persists as an influence on the body long after the event.
The traumatic shock captures and holds portions of the autonomic nervous system in a tonic grip that affects blood flow, hormonal secretion, and neurotransmitter balances of the brain. Until a person gets over the trauma the physical and mental symptoms do not go away. Dr Scaer's view of dissociation as an instinctual and physiological response rather than simply a psychological defence opens the door to many new possibilities of treatment for many baffling conditions." - *in "The Body Bears the Burden Trauma, Dissociation, and Disease", 1984.*

Time Factors in Malignant Growths

"There is another aspect from which the possible influence of a single trauma can be examined, and that is the length of time which elapses between the appearance of a malignant growth and the beginning of the action of a known agent or lesion which incites it. The best example of this is the Carcinoma which Appears After Roentgen-Ray Injury to the skin. There are now some 200 examples of this type of carcinoma in roentgen-ray operators; in these a fairly accurate record is obtainable as to the time of the original appearance of the skin atrophy, the date of formation of keratotic lesions, usually on the hand, and the appearance of the neoplasm. While there is some variation in the incidence of malignant processes, they rarely occur in a shorter time than 6 years, and the average is considerably higher, being about 10 years from the appearance of severe skin lesions." - Dr Leila C. Knox, BA, MD, in "Trauma and Disease", 1937.

Trauma and Lymphatics

"Acute Lymphangitis is Always Secondary to Some Infection.

Chronic Lymphedema, with recurrent attacks of streptococcus lymphangitis or typical erysipelas, may be stirred up by trauma.

Thus, a woman, aged 25 years, who had a chronic lymphedema with attacks of streptococcus lymphangitis (culture was obtained by biopsy), went to work in her own house, 3 months after the last flare-up. After 2 days, chills developed and prolonged rest in bed had to be instituted again.

Injury to such a lymphedematous leg is always fraught with the danger of infection, since tissues soaked with retained lymph are notoriously susceptible to infection.

The most trifling injury causes a lymph flow and should lymph be infected, a spreading infection results.

It is difficult, at times, to separate Venous Stasis and Lymph Stasis, as the lymphatics run with the large veins, whose closure or inflammation may readily affect the lymphatics and produce a lymph blockade.

The repair of the lymphatics, following trauma is very active, and unless an extensive obliterating lymphangitis develops, a simple block of the lymphatics is quickly overcome. Thus, even a radical removal of all the lymphatics in the axilla is not followed by an edema of the arm, unless an obliterating lymphangitis, infectious or carcinomatous, supervenes.

Trauma and the Vasomotor Apparatus

The intimate anatomical and functional relationship of the bloodvessels to their vasomotor innervation naturally is altered in cases of trauma to bloodvessels. The intricate network of sympathetic fibers is affected by such trauma.

Little attention has been paid, in the past, to the rather vague and poorly understood phenomena arising from this source.

A study of these disorders, however, explains many heretofore ignored or misunderstood signs and symptoms of trauma to extremities." - in "Trauma and Disease", 1941.

> ***"Traumatism may have acted as an exciting factor to be sure; but there must have been a dyscrasiae behind the traumatism, else cancer from traumatism would affect al most every part of the body alike and would be far more common, even, than it is.***
>
> ***The Breasts are Glands. Most Glands are the catch basins for the deposit of unreduced metabolic ash, magazines for the reception of toxins that our systems do not eliminate. Glands are the lowest type of human cell-structures, the least resistant to external influences of all the tissues of the body, and become the choked sewage-repositories of the human residence."*** *- Dr C. E. Fisher, MD, in "The Medical Advance", August 1902.*

> ***"Sloan and Woods call attention to the fact that homonymous defects in the visual fields when present in patients with neurosyphilis appear to be dependent on such factors as Cerebral Trauma and Arteriosclerosis with vascular accidents** rather than on syphilitic involvement of the optic tracts or radiations." - in "Perimetric Studies in Syphilitic Optic Neuropathies", Arch. Ophth., August 1938.*

"Edgren points out that the most widely accepted opinion concerning **the cause of Chorea Minor is that it has some connection with a Rheumatic Infection.**

Bacteriologic examinations of the brain, the spinal fluid, and the blood of patients with Chorea Minor (uncoordinated jerking movements), have yielded Diplococci, Staphylococci, and Streptococci.

The pathoanatomic aspects of the brain vary; **embolisms, congestion and small hemorrhagic foci have been observed.**

Moreover, attacks of Chorea Minor have been known to alternate with attacks of Acute Polyarthritis or Endocarditis, and Infections of the Throat, Measles, Scarlet Fever, and Influenza have been suspected of connection with Chorea Minor.

Other investigators have suggested Dysfunction of the Parathyroid Glands, and Psychic or Physical Traumas, as Causal Factors of Chorea Minor." - in "Etiologic Factors in Chorea Minor", Acta Med. Scandinav., 30 June 1938.

> ***"As to the etiologic factors in Cortical Atrophy (onset dementia affecting vision, caused by damage to brain cells): The records of the few published cases show a variety of causes: Intoxications, such as those due to lead, carbon monoxide and alcohol; trauma, and infectious processes. In my case there was a history of being gassed, followed early by the onset."** - Dr Joseph C. Yaskin, MD, in "Archives of Neurology and Psychiatry", June 1939.*

"Trauma is used here in the sense of a physical injury to some part of the body. Before proceeding with the discussion of our classification, one must bear in mind that within recent years the role of trauma in the etiology of disease has assumed great practical significance.

Previously, psychiatric schools of thought, like those in other branches of medicine, were interested mainly in direct causes.

However, the development of compensation laws has led to the need for a reorientation of thought.

The practical demands for medico-legal opinions concerning the partial, in addition to the complete, part played by trauma in the causation of an illness have required more consideration of the influences of trauma as an accessory factor. In Neuropsychiatry this problem is particularly complicated because one must take cognizance of both organic and psychogenic factors, especially when the injury is directed toward the head and brain.

With much available knowledge yet at the descriptive level, some so-called syndromes are not specific.

In many instances neuropsychiatric syndromes may be caused by either Organic, or Psychogenic agents, and Constitutional factors are always important.

The diagnosis of each neuropsychiatric condition must be approached with this threefold concept (that of the: Organic, Psychogenic, Constitutional factors), and the most that can be said in many cases is that there is a combination of all 3, probably with especial emphasis on one factor.

In the final analysis, each case must be judged separately after a complete investigation of the previous constitutional tendencies, the psychogenic shock and the specific physical effects of the trauma." - Dr Kart M. Bowman, MD, Dr Abram Blau, MD, in "A Revised Classification of Mental Sequelae of Trauma to the Head", Archives of Neurology and Psychiatry, June 1939.

> ***"Axon regeneration failure following central nervous system trauma and disease often leads to permanent functional disability."*** *- in "Axon growth and synaptic function: a balancing act for axonal regeneration and neuronal circuit formation in CNS trauma and disease", Developmental Neurobiology, 9 September 2020.*

"Injury does act as a real precipitating factor in a small proportion of cases of nearly every disease.

And a truly scientific study of how trauma lights up (say) poly-arthritis or cancer would throw some light on the mechanism of the disease.

15 years ago I secured a copy of G. B. Stern's brilliant and exhaustive monograph "Trauma in Internal Diseases", 1945.

Furthermore for years before that I had preserved G. F. Walker's excellent article "Injury and Internal Disease", British Medical Journal, 3 May 1941.

Both of these distinguished men were recognized authorities, and they had treated injury in a detached and scientific fashion, as a factor which must be taken into account when it has immediately preceded the onset of any disease." - Dr Michael Kelly, MD in "Archives of Internal Medicine", 1963.

> ***"Concussion of the spinal cord may cause immediate symptoms, or they may be delayed for several weeks.***
>
> ***The more severe traumatism usually produce the more immediate symptoms.***
>
> ***A subacute myelitis may not give symptoms until a month after the accident.***
>
> ***Other Spinal Cord Diseases more or less degenerative in character, such as tabes and chronic myelitis, May Follow Trauma, though no doubt In Most Cases the Traumatism Only Cooperates with Other Causes, especially syphilis.***

> ***Many cases of progressive muscular atrophy apparently originate from severe strain or other injury to a limb. The muscular atrophy depends on a damaged nutrition of the motor cells, this derangement being the effect of morbid impulses from the irritated nerves of the injured joint."*** *- in "Trauma and Disease of the Nervous System", Brit. Med. Jour., 30 April I904.*

"Skeletal remains can preserve a record of events in the life of the individual, including traumas, which are any type of wound or injury, and disease.

The effects of such events provide significant information about the past, both recent and distant, in which the individual lived.

Far example, a high frequency of healed fractures or wounds in males may suggest continual wars or raids, and a high frequency of pathologies in young children may suggest inadequate supplies of weaning foods.

Fractures are among the most common traumas that affect the bones.

A wealth of tumors and tumor-like processes may permanently affect the bony skeleton. Aside from the gross appearance of a tumor, its location may provide clues as to its origin, since different tumors occur characteristically in different regions of the skeleton.

However, it is easy to confuse exostoses, or irregular outgrowths of bone, resulting from injuries (as when extensive hematomas ossify) with exostoses caused by cancer or similar disease processes.

There is little information on the incidence of such pathologies in ancient populations. A relatively common tumorous condition is an osteoma, which is observed as a lump or mound of compact bone, varying from a small button osteoma to a quite large growth. Osteomata are benign tumors formed in areas in which the bone normally ossifies intramembranously, for which reason they are common on the vault bones. It is not unusual for an individual to show several osteomata. They are often asymptomatic during life.

Malignant bone diseases include osteosarcomas and multiple myelomas.

Osteosarcomas typically involve the production of malignant bone tissue, osteoid, or cartilage; the most common site is the distal femur.

They usually occur in individuals between the ages of about 10 and 25.

In contrast, multiple myelomas occur almost exclusively in individuals over 50 years of age.

They involve a cancerous growth of Plasma Cells in the Bone Marrow and therefore are found predominantly in bones that contain a lot of marrow in adults: the vertebrae, ribs, pelvis, and cranial vault." - in "Trauma and Disease", The Human Skeleton, 1985.

Axillary Lymph Node Metastasis

"The main route for Lymphatic Metastasis from breast carcinoma is through the axilla, the Axillary Nodes being the first to be involved in the regional lymphatic filter. For a variable period of time the Axillary Nodes are usually the only regional nodes involved. The best proof of this is the fact that a considerable proportion of patients with not too extensive Axillary Node involvement are cured by radical mastectomy in which the Axillary Nodes, but none of the other regional Lymph Node groups, are removed.

Age of the patient has any significant relationship to axillary metastasis.

The Relationship of the Site of the Primary Carcinoma in the Breast to Axillary Metastasis." - in "The Lymphatics in Cancer", 1972.

The Emunctologist should know that Faecal Stasis (Constipation), which results from Bad Food Choices: Is The Major Factor in the Burden placed upon the Lymphatic Circulation, which then leads to Lymphatic Stasis; which in turn Becomes Toxic, and thus Carcinoma appears first in the Axillary Nodes.

If then this Toxicity spreads (metastasis) via the Lymphatic System, to the Breast Lymphatic Nodes, then Breast Cancer (Carcinoma) will settle and grow in the Breast Area.

Cancer of the Colon and Rectum

"1. Chronic Irritation:

The so-called Benign Lesions of the lower bowel, are the chief factors in the production of cancer in this region. Cancers of the Colon Originate in the Crypt Cells. While all carcinomas of the colon may not originate in polyps, evidence is accumulating that most of them have their origin in just that way.

2. Trauma:

It must not be overlooked that the cecum and the rectosigmoid are the most common sites of Colonic Stasis, and they are also hosts of the Great Majority of Carcinomas of the Large Intestine." - Dr Charles J. Drueck, MD, FACS, in "Cancer of the Colon and Rectum", Journal of The National Proctologic Association, November 1941.

Chapter 10

The Importance of The Microbiome

*“**The Microbiome: 100 Trillion Bacteria of Several Hundred Species.**” - in “Microbes Maketh Man”, The Economist, 18 August 2012.*

What Immunity Means?

*“**Immunity Means That No Abnormal Cell Can Grow or Develop in the Body With Normal Metabolism.**” - Dr Max Gerson, MD, in “A Cancer Therapy”, 1958.*

*“**I learned about the importance of Microbiome and Immunity because of the importance of the relationship between inflammation in the gut and the immune system.** Then around the year 2000, that's when the medical literature started talking about **the Bacteria, and it's the Bacteria that matter.** That was in 2000, now we actually have something called the “**Human Microbiome Project**”, which is very similar to the “Human Genome Project”.” - Dr Joel Evans, MD in “Interconnected”, Docuseries, 2018.*

“I've been doing Microbiome testing since it first became available.

I started doing the earlier stool testing where you look for certain organisms to see if they would grow, look at them under a microscope.

But then **when the DNA Testing came out, we called this Sequencing Based Testing. I was an early adopter. At first there was a lot of excitement about it.**

We though, okay, we are going to find the one bug that caused Rheumatoid Arthritis, or the one bug that caused Autoimmune Thyroiditis.

And we had pretty good literature that appeared to show those associations.

The problem is that when I actually started doing the Testing I didn't find those bugs.” - Dr Robert Rountree, MD, in “Interconnected”, Docuseries, 2018.

*“**The question is, a lot of people have Helicobacter.***

***Only a few people get ulcers, and a few people get stomach cancer. So why is it those people and not the others?**” - Dr Martin Blaser, MD in “Interconnected”, Docuseries, 2018.*

*“**So the key concept is once your Microbiome loses its diversity you lose tolerance. And as your Microbiome goes more diverse you gain tolerance, and then you're not as reactive to yourself or to the food proteins or chemicals around you.**” - Dr Datis Kharrazian, Research Fellow, Harvard Medical School, in “Interconnected”, Docuseries, 2018.*

"All of us are constantly seeding the world with our microbes.

Every time we touch an object, we leave a microbial imprint upon it.

Every time we walk, talk, scratch, shuffle, or sneeze, we cast a personalised cloud of microbes into space.

Every person aerosolises around 37 Million Bacteria per hour.

This means that our microbiome isn't confined to our bodies.

It perpetually reaches out into our environment.

The microbes in our bodies are part of our immune systems and protect us from disease. In the deep oceans, mysterious creatures without mouths or guts depend on microbes for all their energy.

Bacteria provide squid with invisibility cloaks, help beetles to bring down forests, and allow worms to cause diseases that afflict millions of people.

Many people think of microbes as germs to be eradicated, but those that live with us — The Microbiome — build our bodies, protect our health, shape our identities, and grant us incredible abilities." - Ed Yong, in "I Contain Multitudes, The Microbes Within Us and a Grander View of Life", 2018.

"Over 80% of the bacteria on your right hand are not found on your left hand.

Some part of the mother's milk is not used to nourish the baby, but the developing microbiome in the baby. So we see breastfeeding as obviously a way of nourishing an infant. But it turns out that about 10% of breast milk consists of these sugars that babies can't digest, and instead they are there to nourish microbes. To nourish specific strains that are specifically evolved to really efficiently eat these sugars. And in return they feed the baby's cells, they shore up the lining of the gut, they quench inflammation. So a mother who's breastfeeding isn't just nurturing her infant, she's also creating this entire world in her baby's body, selecting which microbes get to live with her child.

Fiber is a good thing, fiber consists of a wide range of complex carbohydrates from plants, and that nourishes an equally diverse range of microbes in the gut.

And fiber has many other benefits in the microbiome too, so that's one piece of solid advice. Many animals rely on their microbiome in order to break down these chemicals in plants. Humans do, to an extent (something like a cow), gets 70% of its energy from microbial metabolism. The animal would not be able to survive if it didn't have microbes as partners in digestion." - Ed Yong, in "The World According to Microbes", Science Friday, 5 August 2016.

> ***"It's traditional wisdom that the immune system responds to bacteria,*** *but customarily we think of infectious agents and how the immune system attacks microbes that may be invading us.* ***But what we've learned over the past decade is our immune system is actually augmented, or primed, by the Microbiome. In other words, the Microbiome improves the function of our immune system. It augments certain activities that are not found in the absence of a Microbiome."*** *- Dr Sarkis Mazmanian, Prof. Microbiology Caltech, in "Interconnected", Docuseries, 2018.*

> ***"Remember, one of the key functions of the microbiome is to maintain the gut lining integrity and that part of your immune system. So, helping that to heal after an insult can be really important.*** *And* ***then eating lots of whole, generally plant-based foods. Those fibers, and those whole foods feed the good bugs, and the good bugs grow."*** *- Dr Robin Berzin, MD in "Interconnected", Docuseries, 2018.*

"The immune system actually requires certain bacteria, non-infectious bacteria, for its optimal activity. And if the immune system doesn't function properly then that actually results in human diseases." - Dr Sarkis Mazmanian, Prof. Microbiology Caltech, in "Interconnected", Docuseries, 2018.

> ***"I realized how the Intestinal Tract was the biggest immune organ of the body. The Intestinal Tract could create inflammation if we weren't eating the right things, if we were eating foods that we were sensitive to, and that inflammation could be the underlying cause of so much of the chronic complex illness that we see today."*** *- Dr Joel Evans, MD in "Interconnected", Docuseries, 2018.*

"If you look at a lot of Chronic Diseases, like Heart Disease, and Hypertension, and Diabetes, and Obesity, non-alcoholic Fatty Liver Disease.

All of these Diseases Have a component of Inflammation.

Many of these diseases have probably been made worse by Poor Dietary Choices. Diet matters. There is this idea of food as medicine. And, **what we eat, and the nutrients that we take up, feed all of the cells in our body, just as they feed all of the Bacteria in our Microbiomes."** - Dr Claire Fraser, Director Institute Genome Sciences, University of Maryland, in "Interconnected", Docuseries, 2018.

"So what we like to do is, we like to look at a more personalized approach.

Our heart panel has 27 different markers, **and one is a marker called Trimethylamine N-oxide (TMAO) which is reflectively directly of the Inflammation in the Gut. Again, fire in the gut, fire in the heart.**

And if a person has autoimmune disease she's 10 times more likely to have a Heart Attack. So the inflammation fire of an autoimmune illness can drive the fire of a Heart Attack, and, or Stroke, and most likely Dementia or Alzheimer's as well." - Dr Mark Menolascino, MD in "Interconnected", Docuseries, 2018.

Your greatest ally in health is your microbiome: the Trillions of bacteria that are the control center of your health! One way to improve the microbiome is via Microbiota Transfer Therapy (Fecal Microbiota Transplant):

> ***"Coincident with Autism Spectrum Disorders (ASD), many children and adults, also experience significant Gastrointestinal (GI) symptoms, such as Constipation, Diarrhea, and alternating Constipation/Diarrhea, which correlate with ASD***

severity. Such GI symptoms appear to be due, in part, to dysbiotic gut microbiota and perhaps their missing roles on modulating metabolites that affect GI function and neurobiological conditions, such as ASD and Anxiety.

Many children with ASD often undergo increased oral antibiotic treatment during the first 3 years of life, which is thought to destabilize their gut microbiota, and open opportunities for competitive potential pathogens to contribute to ASD severity.

A number of studies reported that children with ASD have altered gut bacteria profiles compared with neurotypical children.

Children with ASD have lower abundances of fermentative bacteria (e.g., Prevotella copri), and lower overall bacterial diversity. Thus, gut microbiota appears strongly associated with ASD. Together, these findings suggest that Microbiota Transfer Therapy is safe and well-tolerated in children with ASD ages 7–16 years.

Microbiota Transfer Therapy led to significant improvements in both GI- and ASD-related symptoms. This shifted gut microbiota of children with ASD, toward that of neurotypical children." *- in "Microbiota Transfer Therapy alters gut ecosystem and improves Gastrointestinal and Autism Symptoms", Microbiome, January 2017.*

Bacteria Are Pleomorphic Rather than Monomorphic

Bacteria occur in Various Distinct Forms and Shapes (Pleomorphic), rather than existing in only one form (Monomorphic).

Pleomorphism is the ability of some Microorganisms to alter their Morphology, Biological Functions, or Reproductive Modes: In Response to Environmental Conditions. Bacteria may regress or downgrade back to harmless particles, but this process is only possible in a healthy host organism.

"Understanding Pleomorphism, is essential to the understanding of cancer and its cure, and the cure of many other diseases.

In 1975, using the electron microscope, Parmley showed "microorganism-like structures" in lymph nodes in some untreated patients with Hodgkin's disease.

These round forms with "internal composition" were found within and outside of the cells and resembled mycoplasma and cell wall deficient bacteria, suggesting "subclinical infection."

Swiss oncologist Christian Sauter and pathologist Michael Kurrer discovered "intercellular rods" and "spheres" in 6 Hodgkin's disease patients, by use of a special Periodic Acid-Schiff stain, a traditional stain used to detect fungal infection of tissues. When blood pH is shifted out of its narrow range, these tiny microorganisms can no longer live. In order to survive, they change to a form which can survive. It is these new forms that can become aggressive, parasitic and pathogenic agents within the blood.

> ***"Medical Mycologists and Physicians understand that yeasts such as the common Candidas are just a different form of the same fungi. There are many fungal moulds that can turn into a yeast and some of these yeasts turn into a mould. We see this routinely in the laboratory. It is a phenomenon called dimorphism, some of these fungi will also take on additional forms and are known as Pleomorphs. This has been observed for over a 100 years and we now fully understood how and why these various morphologies come into being."*** *- Dr M.J. Dvmanov, Professor of Medical Mycology*

The job of Candida albicans is to recognize and destroy harmful bacteria:

Without it, we would be defenseless against many pathogenic bacteria.

If the number of friendly bacteria is decreased, the immune system is weakened, or other conditions for yeast proliferation occur (diet high in sugar, improper pH in the digestive system) Candida albicans will shift from yeast form to mycelial fungal form and start to invade the body. In the yeast state, Candida is a non-invasive, sugar-fermenting organism, while in fungal state it is invasive and can produce rhizoids, very long root-like structures. Rhizoids can penetrate mucosa or intestinal walls, leaving microscopic holes allowing toxins, undigested food particles and bacteria and yeast to enter the bloodstream. **This condition is known as Leaky Gut Syndrome and that is an explanation for many food and environmental allergies.**

Over the past 100 years there has been much research implicating a microbe as, not the initial cause, but as the final state of cancer. Final cause meaning tumors are not distinquishable from the infections that inhabit them. Rife claimed that the microbe involved in cancer changed forms depending on the terrain it lived in.

Pleomorphic means that bacteria may be different forms of the same microbe.

These microscopic invaders get their energy from blood sugars which our bodies are supposed to be using, and they grow and multiply by eating our bodies' proteins. Their needs can turn into our cravings.

These bacteria are ubiquitous and exist in the blood and tissues of all human beings, part of the basic fabric of life. **Modern medicine refuses to acknowledge the obvious, that bacteria and fungus are omipresent and are just waiting for the right conditions in which to begin rapid multiplication.**

We see this process universally with in death of tissues or in spoiled food.

Rot is an underlying biological mechanism inherent in all earthly species being the natural process of biological decay. In terms of human physiology in the absence of a protective immune response, cell wall deficient bacteria may become pathogenic and foster the development of cancer and many other diseases of unknown etiology.

Cancer cells with their defective cell physiology would certainly create fertile soil for the uncontrolled expansion of bacteria and fungi drawing down upon themselves the full wrath of these infectious agents.

How then can we separate the cancer from the infection when the process would be continuous?

Certainly we know that cancer patients are highly prone to bacterial infection.

> ***"Microbiologists do not recognize or accept the various growth forms and the bacterial "Life Cycle" proposed by various cancer microbe workers. Most bacteriologists do not accept the idea of a bacterium changing from a coccus to a rod, or to a fungus."*** *- Dr Alan Cantwell*

"Under appropriate conditions, bacteria can lose their cell wall and become amorphous, smaller, highly pleomorphic "cell-wall deficient forms."

Under suitable conditions, mycoplasma can enlarge to giant-sized forms ("Large bodies") resembling fungal and spore-like forms. It is vital to be aware of and to recognize such unusual and hard-to-detect forms in tissue microscopic sections because, in my experience, this mycoplasmal form is the form the cancer microbe takes inside the body in human disease.

Microbiologists love to separate (and classify) bacteria, mycoplasma, and fungi, as distinct entities.

In Fact: **There Is Interplay Between All of Them. Besides inhalation, people can become exposed to mould through skin contact and eating mouldy food.**

Toxic Moulds Can Produce Several Toxic Chemicals called: Mycotoxins That Can Damage Your Health.

These chemicals are present on the spores and small mould fragments that are released into the air.

Dr Young states that All Illness Is But This One Constitutional Disease, Its Result Is Mycotoxicoses (Toxicity Caused by Mycotic Infection), or in other words, a yeast and fungus infection - the great decomposers of living and dead bodies.

Blood Is Under pH Control. Ideally it has a pH in a narrow range around 7.3, which is slightly alkaline. A pH around 7.3 is the perfect environment where the normal pathogens in the blood Live In Harmony With The Body.

However, when blood pH is disturbed and is shifted out of that narrow range then Native Microorganisms, in order to survive, would Change To A Form Which Can Survive.

It is these new forms; that become aggressive, parasitic and pathogenic agents within the blood. Dr Guenther Enderlein, a German bacteriologist, contended there are thousands of forms and many of these are able to overcome the body's defense mechanisms, causing multiple disease situations.

When the body's Blood pH changes away from the ideal, it can become an environment for opportunistic microorganisms to grow and flourish." - Dr Mark Sircus, MD, in "Sodium Bicarbonate: Nature's Unique First Aid Remedy", 2014.

The Relation Between Food & Health

"Dietary Factors (Food Choices) contribute to:

1. Hypertension,
2. Obesity,
3. Heart Disease,
4. Stroke,
5. Type 2 Diabetes Mellitus,
6. Cancers, especially Gastric and Colorectal Cancers.

Fundamental concepts in Nutrition, such as the relation between the Gut and Immunity, and the role of the Gut Microbiome in Health and Disease. Highlight How Food is Selected, Ingested, Digested, and Metabolized, allowing clinicians to tailor it as Prevention and Intervention for Many Common Diseases." - in "Nutrition in Medicine", New England Journal of Medicine, 11 April 2024.

> *"When I decided to go into medicine I met Dr Dean Ornish, MD who came to Omaha, Nebraska when I was a senior in high school and showed that if you had a Heart Disease and were scheduled for a Heart Bypass that you could use lifestyle medicine and not need the bypass. Now, 35 years later, we found he was right.* ***And a big factor of the inflammation in the heart that causes Heart Disease is the Inflammation in the Gut. I think of it as fire in the gut, fire in the heart, and also now fire in the brain because what happens in the Microbiome of the gut can drive the Microbiome Inflammation throughout the rest of the body."*** *- Dr Mark Menolascino, MD in "Interconnected", Docuseries, 2018.*

> ***"The normal function of our immune system in this cohabited body of ours is just proper management of relationships. That's your Immune System."*** *- Dr David Relman, MD, in "Interconnected", Docuseries, 2018.*

> *"I shall not enter on the interminable subject of* ***Human Aliment, except to give one or two Hints; Never eat too much."*** *- in "The Physician", The Belfast Magazine and Literary Journal, 1825.*

> ***"Do not ye yet understand, that whatsoever entereth in at the mouth goeth into the belly, and is cast out into the draught? But those things which proceed out of the mouth come forth from the heart; and they defile the man. For out of the heart proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies; These are the things which defile a man."*** *- Matthew 15:17-20*

Food: Is The Gateway to Heal Disease

Healthy Nutrient-Dense Food is a powerful tool capable of preventing, and reversing chronic conditions.

> *"I became really passionate as* ***I started to see Food as the Gateway to my Healing. About 18 months later I could really see some drastic improvements. Food was was number one, but so was meditation. So was reclaiming those Periodic Rhythms, those Circadian Rhythms protecting my body from unnatural light, and getting my feet in the ground and you know the Electricity. So I became really passionate about why don't we get taught this stuff? Why is this been removed from our education system?*** *Why are we facing greater, and greater levels of chronic disease?* ***That led me to not just heal myself but turn myself into a vessel for healing."*** *- Jessica Bell, in "Young Builders: Modern Motherhood", Solari Report, 19 May 2026.*

The Healthy Foods bring vital nutrients to cells, supplying:

I. Vitamins.
II. Minerals.
III. Antioxidants.

Directly Influencing:

1. **Inflammation.**
2. **Energy Production.**
3. **Disease Prevention.**
4. **Cellular Repair.**
5. **Hormone Regulation.**
6. **supporting immune function.**

Whole Nutrient-Dense Foods (immune-boosting foods rich in nutrients, antioxidants, and bioactive compounds) a diet rich in prebiotic fiber - rather than Processed Foods (altered from their natural state) - are the most effective way to optimise gut health, regulate blood sugar, and strengthen the immune system.

> ***"The food we eat is one of the leading causes of illness.*** *As malnutrition increases, so too do the associated diseases." - in* ***"How your diet can treat diseases",*** *Follow the Food, BBC, 2022.*

Not Learned to Indulge in Excess Eating

"He Had Not Learned to Indulge in Excess of Eating:

For better or for worse the choice had been made, and the fruit of the tree of the knowledge of good and evil had brought the seeds of death to man as the Law-Giver had promised. Of good for who will deny that man's capacity for service is not greater in the communal life, and, of all the creatures, he most has set himself to succour and to save his kind. For suffering has come with the Law of the Artificial. Man may or may not "save his soul" by the care he lavishes upon the stricken. It is certain he destroys his fellow wholesale and himself in the result.
In the last stages of a civilisation now passing as others have passed, and by the same way:

The Multiplication of Hospitals, Sanatoria, and Lunatic Asylums, on the one hand, and on the other the Elaboration of the Science of Medicine and Surgery, bear eloquent, and all too convincing Testimony to the fact that the outraged Law of the Wild has called for the price of outrage, and civilised man is passing, passing, downhill to the extinction that awaits the Unfit. A county medical officer published lately a statistical account of the health of the school children in a large English county, and the appalling statement was made that: Practically No Healthy Children Remain." *- Dr A. White Robertson, LRCP, S. Edin., in "Studies in Electro-Pathology", 1918.*

All the Gut's a Stage And All The Microbes Merely Players

"The microbiome is an ecosystem of microscopic life (bacteria, fungi, etc...) that exists within and on our bodies. *The genes contained within the microbiome outnumber our own 100 to 1.* ***We are colonized by our microbiome at birth, and the nature of our birth (vaginal or C-section) and the food we eat (breast milk or not) significantly influence which specific organisms colonize us.*** *The host's genetic variation affects microbiome composition, and* ***diet shapes gut microbiota.*** *Research also suggested that humans have even acquired genetic material, in our own DNA, directly from our microbiome through horizontal gene transfer." - in "Biological Anthropology in 2015", American Anthropologist, 2016.*

"How Infection Works:

There is a close connection between Microbes and Humans.

Microbes occupy all of our body surfaces, including the:

1. Skin
2. Gut
3. Mucous Membranes

Our bodies contain at least 10 times more Bacterial Cells, than Human Cells, blurring the line between where Microbes end, and Humans begin.

Microbes in the human Gastrointestinal Tract alone comprise at least 10 Trillion organisms, representing more than 1,000 species, which are thought to prevent the gut from being colonized by disease-causing organisms.

Among their other beneficial roles, Microbes synthesize vitamins, break down food into absorbable nutrients, and stimulate our Immune Systems." - in "What You Need to Know About Infectious Disease", National Academy of Sciences, 2010.

Taking Medical Trade Medication Increases Risk of Infection

"Researchers, analyzed data on 564,969 people 20 to 80 years old, including 188,323 who had been Prescribed Acid-Suppressing Medications.

These Medical Drugs included Proton-Pump inhibitors (such as: Nexium, Prilosec, Prevacid), and histamine blockers, also called H2-receptor antagonists (such as: Tagamet, Zantac, Pepcid). **None of the participants had Inflammatory Bowel Disease, or Bowel Cancer. Over 14 years 22,705 positive test results for Gastrointestinal Infections attributed to C. Difficile, Campylobacter, Salmonella, Shigella, E. Coli bacteria were reported. People who took Acid-Suppressing Medications were about 3 Times as likely to have had a Gastrointestinal Infection as were those who did not take the Heartburn Drugs.**

Acid-Suppressing Drugs may alter the Gut Microbiome, the balance of microbes in the intestine and Increase Risk for Infection." - in "Acid Suppression Medications and Bacterial Gastroenteritis", British Journal of Clinical Pharmacology, 5 January 2017.

> ***"Forget the theory of the microbic origin of the disease, but do not neglect to keep the patient in as near an aseptic condition as possible. Treat the disease with reference to the indications present, and do not treat it as a direct infection."*** *- Dr Finley Ellingwood, MD in "Treating Pneumonia", The Eclectic Medical Gleaner, January 1910.*

"Disease Germs"

"Disease Germs": are mostly man's friend. Their main mission in life is destruction of filth. They are produced by and bred in disease. If you don't want their presence or help, Keep your bodies from Gathering filth, and live on live foods. Most Acute Illnesses are Nature's (God's) method of ridding our systems of waste, which would otherwise cause disease. They are "house-cleanings", "healing crises", preventing collection of dangerous dirt. They are Nature's protecting reactions against existing disease. But for Acute Illnesses, the human race would have ceased to exist long ages ago. Suppression of such protective reactions, however seemingly adroit, is usually the height of unwisdom. A big proportion of chronic disease is a direct result of suppression of Acute Illnesses. Yet the one really impressive achievement of modern Medical Trade "Science", is the increasingly effective suppression of acute illnesses. Believing these Illnesses caused by the "germs", Medicine kills millions of germs, and almost as many men.

Abolishing Symptoms, which are Nature's warnings, or (worse still) evidences of her efforts to heal, without adequate measures to deal with their cause, is merely preventing Nature from achieving her beneficent purpose of protecting us from the consequences of error or sin.

To employ to this end *(as the Medical Trade does)*, means almost invariably destructive and disease, producing in themselves, is surely to plumb the last depths of human ignorance." - Dr Ulric Williams, M.B., Ch.B. in "Hospitals and Hooey or Health?" 1941.

> ***"We are all afraid of germs because we are all ignorant of them. What we should be afraid of is lowered resistance which comes from within. The folly of our topsy-turvy notion leads to much preventable confusion and despair. Instead of developing a proper respect for our own extraordinary powers, conferred upon us by Mother Nature, we endow germs with unnatural powers which they should not possess. Here let me repeat one solemn truth which should be repeated over and over each day until everybody comprehends its meaning and acts upon it. Normal resistance to disease is directly dependent upon adequate food, normal resistance to disease never comes out of pill boxes. Adequate food is the cradle of normal resistance, the playground of normal immunity, the workshop of good health, and the laboratory of long life."*** *- Dr Charles H. Mayo, MD, surgeon and founder of the Mayo Clinic, USA.*

> ***"It is important to remember that the mere introduction of germs into the living organism does not ensure their multiplication or the production of disease. The condition of the organism itself has much influence on the result. Pasteur has certainly made a hasty generalization in declaring that the only condition which determines an epidemic is the greater or less abundance of germs."*** *- John Shaw Billings*

The Relation of the Microbiome Between Health and Disease

"The idea that the intestinal content can cause a number of physical and psychological ailments is very old. Charles-Joseph Bouchard wrote a book about Autointoxication in 1894, and the Royal Society of Medicine discussed the role of Alimentary Toxaemia at a symposium in 1913.

The human body contains about 10 times more microbes than human cells, and the gut harbours around 1,000 different bacterial species.

Regarding its size and metabolic activity, the "microbe organ" is comparable to the liver. Communication between microbiota and their hosts has been denoted as "inter-kingdom signalling." The Gut Microbial Flora performs several protective, structural, and metabolic functions, and may be incriminated in a number of disorders and diseases.

When I started studying medicine more than 60 years ago, I heard two statements about the gut:

1. The gut has a brain, if not a mind, of its own.

2. Bacteria constitute up to 50% of feces' mass and may be of importance for its texture.

The functional importance of gut microbes was obvious, and today, it is generally accepted that "Man – Microbes - Superorganism," and there is increasing consensus that "Gut - Microbiota - Superorgan."

Absence of the probe coding for E. coli during the first month of life was associated with rapid growth during early life while the presence of Bacteroides spp at 1 month was associated with reduced growth.

Our study shows that the absence of E. coli may be tied to adverse child health outcomes, since its absence was tied to rapid growth which is an early marker of the risk of obesity in later life.

We hypothesize that E. coli may play an important role in very early life, maybe due to cascading events set in motion by the very early colonizers.

Autism Spectrum Disorders (ASDs) are a family of neurodevelopmental conditions of rapidly increasing incidence.

The condition was originally prevalent in approximately 1 in 30 in Korea.

ASD comprises behavioural symptoms, including communication and social impairments, sensory abnormalities, and restricted and repetitive behaviour, often with self-injurious behaviour.

In many children and adults with ASD, co-morbidities include restrictive eating, gastrointestinal symptoms, and seizure disorder. "Common infections, chronic antibiotics, and clostridia colonization contribute to carnitine collapse, Colitis, Convulsions, and Compulsions" impairment of carnitine metabolism from a variety of causes may be central to Autism Pathogenesis and Regression

Of note, impairments in carnitine metabolism are a common feature in ASD and in our PPA rodent model Although the underlining cause of a relative carnitine deficiency reported in ASD remains unclear, we have noted that diverse neurodevelopmental conditions with gastrointestinal symptoms linked to ASD, such as Reye syndrome, valproate toxicity, propionic acidemia, and mitochondrial disorders, often collectively show disruptions in carnitine metabolism. Bacteria should no longer be seen as pure enemies.

Nowadays, there are enough evidences to place microorganisms as key elements in Human Homeostasis. It is known that a balanced human Intestinal Microbiota, constitutes an important protection against the establishment and overgrowth of pathogenic microorganisms, e.g. Clostridium difficile (CD) causing intestinal disorder in the host. The Intestinal Microbiota has a Pivotal Role in the Maintenance of Health of the Human Beings, Especially in the Defence Against Pathogenic Microorganisms." - in "Microbial Ecology in Health & Disease", 2015.

Chronic Bacterial Infections of the Bowel A Major Factor in the Causation of Disease

When the Intestinal Mucosa is well, Bacilli Coli performs normal, and helpful functions; but, when any drastic changes in the contents of the host gut disturbs the intestinal mucosa, this influences the balance, and change the metabolism of B. Coli. Any major alterations towards illness, are mainly initiated by Bad Food Choices, which results in the creation of an environment in the gut, which makes for the bacilli to adapt to its new environment, in order to live. A balanced composition of the gut microbiome is critical to human health. Individuals with disorders such as: Inflammatory Bowel Disease, Autism, Chronic Fatigue Syndrome, and others, have predominantly Gastrointestinal Health Issues, in the causation of their symptoms.

"The work begun on this subject by Dr Bach, and myself, with some help from Dr MacGowan, has been continued during the last year by myself alone. Since the laboratory aspect has been, for the time being, surveyed, the clinical side of the work has become of more importance. **I am glad to be able to report that the investigation may be regarded as completed.**

It has fallen into 3 stages:

1. The confirmation of Dr Bach original researches into Chronic Bacterial Infections of the Bowel as the Prime Cause of Chronic Disease, presenting many and varied symptomatologies. The comparison of these infections with the "Psora of Hahnemann and the suggestion that this latter is really a masterly and prescient conception of Intestinal Toxæmia, and should be regarded (at any rate) in that light."

2. Taking infections of the Gaertner type as much the commonest infections, we concentrated chiefly on these, **and have been able to show that successful treatment by Vaccines and successful treatment by homoeopathic remedies act curatively in identical ways, and that a greatly increased output (excretory probably) of bacilli is the main feature of it.**

3. **I have experimented with potencies of the Gaertner bacillus and have been successful in showing that patients respond to potencies as successfully as they do to Vaccines. This means that a new and most potent remedy has been added to the homoeopathic materia medica,** and this is a result upon which homoeopathists are entitled to congratulate themselves, this new "Nosode." - Dr C. E. Wheeler, MD, in "The British Homoeopathic Journal", 1911.

Internal Vaccination

"What excuse has the homeopathic physician for **desiring a New Form of Vaccination?** This question was put to me by a member of the board of health in Chicago. Let's look at the ordinary method, which is an improvement upon Jenner's barbarous way of smearing the scarified arms of the pure and innocent with the filthy corruption of the diseased bovine. **First, vaccination, although successfully performed, does not always prevent an attack of small-pox, or does not prevent a modified form, as varioloid, which may itself be as dangerous to health and life.** This array of symptoms are so very similar to the diagnostic symptoms of small-pox that they will be easily remembered. The sharp stitching pains in head, chest and back, the offensive and fetid odor, the severe chill and high fever, together with the skin symptoms, complete the picture of the remedy on which we base our claim to a new, scientific, safe and cleanly method of preventing, abridging and curing small-pox. **Variolinum (Variolinum Lymph from smallpox pustule, Dose 6C, 12C, 30C); administered in the homeopathic potencies will not only immunize one from the ravages of small-pox**, but they cannot be successfully vaccinated after taking the remedy, and up to the present time there is no record of persons so protected having taken the dread disease, although repeatedly exposed by nursing cases sick with small-pox. **I have the statements of 40 qualified physicians in good standing in regard to the efficacy of variolinum in the prevention of small-pox, and many of them speak in the highest terms of the method.**

> ***"I have used Internal Vaccination for years and have never had a failure.***
> *Of late years **I refuse to use (External) Vaccine matter, in or under the skin, to avoid being a party to crime**, for, with my experience, **it would be such to introduce a poison that might disfigure a patient for life."** - Dr William W. Lemon, MD, Kansas*

"I Believe the Homeopathic Vaccination Is The Most Rational of Any." *- Dr A. C. Pattee, MD, Greensburg, Kansas*

"I believe Homeopathic Vaccination to be Superior to Ordinary (Medical) Vaccination, and an Effective Preventive of small pox." *- Dr Edward H. Holbrook, MD*

"I Believe the Homeopathic Vaccine is an Effective Preventive of small-pox if not limited to 1 dose of variolinum. I believe It To Be Superior to Ordinary (Medical) Vaccination, and the only rational method." *- Dr H. E. Messenger, MD, Iowa*

"I believe the Homeopathic Vaccine to be an Ideal Preventive of small-pox." *- Dr F. Austin Stowell, MD, Massachusetts*

"I have had an extensive experience with Homeopathic Vaccine, and Always Found it Effective." *- Dr Ernest Clark, MD, Michigan*

"I have used no other but the Homeopathic Vaccine for 30 years and have never been disappointed in the result." *- Dr John C. Nottingham, MD, Michigan*

"I Believe the Homeopathic Vaccine to be as Effective, as and much Less Dangerous Than the Ordinary (Medical) Vaccine." *- Dr Wm. Tyler, MD, Michigan*

"We Do Not Want Authority for Truth, but Truth for Authority." *- Dr Stella Jacobi, MD, in "Variolinum; or, the Homeopathic Vaccination", The Medical Forum, Jan. 1906.*

"Statistics on Vaccination against Small Pox in the Philippines when the United States took over are instructive. Reports run thus: In 1918, the Army Forced the Vaccination of 3,285,376 natives when No Epidemic Was Brewing, only the sporadic cases of the usual mild nature. Of the Vaccinated persons, 47,369 Came Down with Small Pox, and of these 16,477 Died. In 1919 the experiment was doubled, 7,670.252 natives were Vaccinated. Of these 65,180 cases Came Down with Small Pox, and 44,408 Died. One sees here that the Fatality Rate Increased in the Twice Vaccinated cases." *- Professor Dr William Frederick Koch, MD, in "The Survival Factor In Neoplastic Diseases", 1961.*

Variolinum
(Variolinum Lymph from Smallpox Pustule)

"Dr Fellger reports, giving Variolinum to hundreds of people, and none of them were ever attacked with small-pox.

In one family where the father had confluent small-pox, he gave Variolinum as a prophylactic, and of the others, although not 1 had been vaccinated, not 1 of them took the disease. He reports a case of a broker in Philadelphia who was well pitted from small-pox; when a child he was vaccinated, and he became idiotic in consequence. When 16 years old he had a violent attack of small-pox, after which he recovered his reason. Variolinum is indicated in small-pox where there is not much pain; the patient can even eat fairly well; the skin looks natural between the pustules; the appearance of the eyeball is white and natural; **the mild uncomplicated cases of small-pox are the ones calling for Variolinum."** - Dr Henry Clay ALLEN, MD, in "The Materia Medica of the Nosodes", 1910.

Bowel Nosodes

The first published paper on this concept, was presented by Dr Edward Bach, MD in "The Relation of Vaccine Therapy to Homoeopathy", The British Homoeopathic Journal, April 1920.

Dr John Paterson, MD, a co-worker of Dr Bach, carried on the Clinical Research on Bowel Nosodes after 1929.

Studying the characteristics of Bowel Flora especially their behaviour in both Health and Disease. He conducted research for 20 years, and examined 20,000 stool specimens. **He came to the conclusion that the non-lactose fermenting non-pathogenic bowel flora, undergoes definite changes in the disease condition.**

And observed that after the administration of the suitable Bowel Nosode, the curative process begins. Following this, the non-lactose fermenting bacteria begins to mutate to other groups, and ultimately disappear.

This occurs simultaneously with the disappearance of the symptoms, and the efflorescence of the skin eruptions ultimately clear, and a marked increase in the vitality of the patient.

Bowel Nosodes, Have the Ability to Transform the Outcome of Chronically Ill Patients.

Any clinical discussion dealing with the Micro-Ecology of the Bowel would not be complete without a dedication to Dr Edward Bach, and John Paterson, work.

Their bacteriological investigations, and clinical correlations spanned 40 years, systematically gathering data, and analysing thousands of bacteriological cultures from patients.

The Use of Autologous Vaccines in Chronic Disease

The potential role of autologous vaccines in chronic disease was investigated by Bach (Bacteriologist), and Wheeler (Clinician) who, under joint authorship, published a treatise: "Chronic Diseases - a Working Hypothesis", 1925.

In this paper they selected 500 cases, which had been under observation for at least 6 months, and had received no treatment other than the Autologous Vaccine.

> *"Dr Thomas Dishington conceived the idea of having the autologous vaccines of patients potentised and from a collection of autologous vaccines making a proving." - Dr Bach*

Indications for the use of Intestinal Nosodes in Diseases of Children.

The Bach Polyvalent Nosode was a potency prepared from the intestinal vaccine already in existence.

In association with Thomas Dishington, John Paterson made clinical observations on the effects of the polyvalent nosode at the Scottish Homeopathic Children's Hospital, and by 1927 **they were satisfied that the nosode had clinical value.** Wheeler, Bach and Dishington published a conjoint clinical paper in 1927.

Outfit for Collecting Specimens (Paterson)

1. Hard glass test tube 6 inches x 3/8 inches.
2. Cork (must stand 160 degrees dry heat)
3. Nickel probe with:
   a. Sharpened end - for insertion into cork.
   b. Roughened end - carries cotton wool tip.
4. Label for patient's name, address, etc...
5. Wooden container - for transit.

Bowel swabs are sterilised by dry heat 160°C. for 30 minutes.

Taking Specimens

1. Use clean dry receptacle to receive faeces.
2. Withdraw cork from glass tube.
3. Do not touch metal probe or cotton, wool tip with fingers.
4. Dip point into the faecal material so as to soil cotton
5. Shake off any loose pieces and replace probe into tube.
6. Replace tube, firmly corked, into wooden container ready for transit.

Bulk specimens of faeces are not required, and are unsuitable unless for immediate culture. **Specimens taken by "bowel swab" retain their primary characteristics for long periods without change.**

Secondary change may occur in bulk faeces retained for any length of time.

After presenting their paper at the Quinquenial International Homeopathic Congress of 1927. Paterson visited Bach and learned his bacteriological techniques, prior to establishing a bacteriology laboratory in Glasgow." - in "Systems & Symbiosis - The Bowel Nosodes Reappraised", 2007.

The Rediscovery of Psora (Intestinal Toxaemia); Historical Review of Bach's Nosode Therapy

"The object of this paper is to continue the discussion of the problems presented by Dr Dishington on certain Nosodes prepared from abnormal organisms in the intestinal canal, which have been brought before your notice on different occasions during the past 8 years. I want to describe how these Nosodes have been developed, and evolved, and the processes of thought, reasoning and practice which have placed them in the position they now hold.

3 Main Principles had to be realized before the present effective state of these Nosodes could be obtained:

1. The discovery of the group of bacilli which formed their basis;
2. The value of Hahnemann's laws with regard to repetition in the application of the doses;
3. The fact that the Nosodes would be effective in a potentized state.

About 1912 it was recognized that there were to be found in the intestinal content of both apparently healthy as well as diseased people a class of bacilli which had hitherto been considered unimportant, but which were then proved to be associated with Chronic Disease. These organisms were the various types of non-lactose fermenting bacilli belonging to the great coli-typhoid group, very closely allied to such organisms as the typhoids, dysenteries and paratyphoids, yet not giving rise to acute disease and, in fact, not associated with any specific morbid conditions.

1. Effect of Treatments

Owing to the frequency with which these bacilli were found to be present in such a large percentage of cases when no other abnormal or pathogenic organisms could be isolated, **it was decided to try the use of these in vaccines to see if any benefit could be obtained in cases of chronic disease, and it was found that in**

spite of them being non-pathogenic in the ordinary sense of the word, great benefit could be obtained when they were used as a therapeutic agent in this manner.

It was shown that by such vaccines a mild exacerbation of all the symptoms in a chronic case could be produced, and that in favourable circumstances a definite improvement followed.

2. Period of Dosage

Cases of good results were recorded when patients were so treated, but in those days the percentage of these was comparatively small, owing to the fact that the injections were given much too frequently and a stated intervals, such as 7 or 10 days, with a consequent result of serious over-dosing and interference with the starting of a beneficial reaction.

At the present time several bacteriologists and a considerable number of clinicians can testify to the undoubted connection that exists between these organisms and chronic disorders, and between them and Intestinal Toxaemia with its consequent morbid results, so that there no longer remains the least doubt as regards this relationship.

Some hundreds of practitioners have proved this point from the clinical results that have been obtained by the use of preparations made from these organisms, and the evidence has now grown so large that there is no longer any room for doubt on this point.

A certain amount of laboratory evidence has also been accumulated to prove that there is a relationship between these groups of organisms and disease.

If specimens of a patient are plated out day by day for a considerable period, it will be found that these abnormal organisms are not persistently and constantly present, but that there are negative phases when they are entirely absent, and positive ones when they are present in varying proportions.

Moreover, **the total numbers during the positive phases vary from day to day.**

If we start plating during a negative phase, after a time they begin to appear in the specimens, at first in small numbers, then steadily rising each day until the maximum is reached, when the percentage again falls until they disappear.

Both the maximum percentage and the length of the positive and negative phases may vary very considerably in different subjects, but the interesting point is that the health of the individual, whether in disease or in an apparently normal condition, varies directly with these phases.

Most commonly in cases of chronic illness, the symptoms are worse towards the end of the negative period, and are relieved when there is an output of the abnormal organisms (and generally speaking), the greater the output the more benefit the patient receives. In the apparently healthy, if there are any times when the individual tends to be below the normal standard and is not up to his usual form, these generally occur at the same period of the cycle.

If daily charts of the results of the examinations are kept, it is generally possible to know from these the condition of the patients, and how they are progressing, and they have very often been a useful guide in selecting the correct time for the repetition of doses.

Thus, from a clinical and a laboratory standpoint, there can no longer be any doubt that these groups of Organisms bear a distinct Relationship to Chronic Disease.

The next step **(the discovery that the doses should be given not at stated intervals, but according to the response of the patient),** came as follows:

In the laboratories at University College, in treating cases of Pneumonia with vaccine, it was found that better results were obtained when doses were given according to how the patient reacted to the injection, and that if after a dose the pulse rate and temperature fell, the results were much more satisfactory if no further treatment was given as long as this improvement continued, repetition only being made when the pulse-rate and temperature tended again to rise.

The cures occurred more quickly, and with a higher percentage of successful results, and considerably fewer doses of vaccine were required.

After this had been definitely realized and proved, it logically followed to try the same method **with all types of acute febrile cases, and the same beneficial results were found to occur.** When this had been definitely established, it occurred to the same workers that this law which appeared to apply to all acute diseases might possibly be the same for cases of a chronic type.

So it was tried, and the results again were more than had been anticipated.

In chronic cases a minimum interval of 3 weeks was allowed to elapse before a dose was repeated, because it was found that in some instances benefit did not begin much before that time, and if at the end of 3 weeks improvement had started no further dose was given until every trace of improvement had ceased, and that either the condition had become stationary or there was a tendency to relapse.

On these lines, it was found that the period of amelioration varied in cases from 2 or 3 weeks to intervals as long, in rare examples, as 12 months, and that by refusing to repeat during the time of improvement enormously better results were obtained, and a higher percentage of good results occurred, while of course a much smaller amount of vaccine in each case had to be given.

Such was the success that this method has been persevered with up to the present time.

We Arrived at 2 Conclusions:

1. **This particular group of non-pathogenic non-lactose-fermenting bacilli of the intestine were undoubtedly associated with chronic disease.**

2. **Vaccines made from them were very valuable curative agents, if given according to the laws of Hahnemann,** and studying the response of the patient, and not, as had hitherto been done, at regular intervals.

It was at this stage that, coming to your hospital as your bacteriologist, one was introduced to the Science of Homeopathy.

On reading Hahnemann's "Organon", for the first time, one instantly realized the fact that **the work of the modern Immunity School was merely the rediscovery, by a different method, of facts that had been realized by him a century before**, and in conjunction with some of your physicians homeopathic principles were at once applied to these various groups of bacilli and preparations made from them, potentizing them in the same way as you do your remedies.

It required only a very short time to prove that Nosodes so prepared were of very great therapeutic value, and the further research of the last 8 years, in which many hundreds of cases were treated, has more than justified the earlier hopes.

Today in England, Germany, America, France, Holland and Switzerland, these Nosodes are being used.

Looking at it from the homeopathic point of view, the first important point to be considered is whether these preparations are in accordance with the laws of Hahnemann and whether it is an extension of his work.

Many of us feel, that this is the case, **as the founder of homeopathy in more than one instance uses the morbid product of disease as the basis of a remedy,** and one has little doubt that if he had been in a position to isolate these organs they would have been used. Moreover, **it is still uncertain whether these organisms are the cause, the result or an attempted cure of disease.**

We can do little more at the present time than say that There Is An Association.

3. The Bactenal types in Chronic Disease

It is not at all improbable that these bacilli are a variation of the Bacillus Coli, and the latter, from its universal presence in our modern civilization, not only in men, but in animals, birds, &c, must be considered more or less as a normal inhabitant of the intestine.

Experiments tend to indicate that during great basic fundamental changes in the body the intestinal flora may alter, as if attempting to keep in harmony, for it is not impossible that these groups of bacilli, are the normal B. Coli altered to meet certain needs, **compelled to do so by the altered state of the host**, and that when the bacteria are in this condition they are undoubtedly valuable therapeutic agents when potentized.

Science is tending to show that life is harmony (a state of being in tune), and that disease is discord or a condition when a part of the whole is not vibrating in unison.

In a differentiation of these organisms it is interesting to note, that the sugar lactose is used. Lactose differs from the rest of the sugars in that it is an animal product, the others being vegetable. Recent research indicates that **for a ferment to be able to act upon a substance, the ferment must be able to vibrate in tune with the atomic weight of the substance which has to be fermented.**

Hence, it means that organisms capable of fermenting lactose are able to vibrate in tune with animal tissue, whilst those which are unable to do this are equally unable to be in harmony with substances other than of the vegetable type.

If this theory is able to stand the test of time, it will get us a considerable way towards the understanding of things of fundamental nature, and it means that we have here a method of differentiating organisms which are beneficent from those which are adverse to the human subject.

It is at such a time as they are adverse that we choose to potentize these products and use them as therapeutic agents in the cure of disease.

On all other points, of course, **the Nosodes are identical with Homeopathic Remedies, and their preparation is exactly in accordance with the laws of Materia Medica.**

No one who has studied Intestinal Toxaemia to any extent can possibly fail to see the similarity between this and the basic, fundamental disease described by Hahnemann as Psora (Intestinal Toxaemia).

Dr Gordon of Edinburgh, is going to draw this similarity for you at length at some future date, when he will point out to you the indubitable provings of **the nature of Intestinal Toxaemia which Hahnemann classified under the name of Psora. Hahnemann lays great stress on the impossibility of having more than one disease at the same time.**

This we find in regard to the work on intestinal flora; it is surprising that only in the very rarest cases does one find more than one abnormal type of organism present in one individual, another point of confirmation of the theory that the two states are identical.

In spite of there only being one type of organism present at a particular period, this type may certainly be changed by means of a vaccine (Enema), or Nosode, or remedy administration, indicating that the type of organism depends on the condition of the patient, and that it varies its nature in conformity with the soil in which it has to live.

Generally speaking, in people who have not been treated by homeopathic methods, the organism remains much more constant to its type over a prolonged period of time.

During the past few years Besredka and others have done an enormous amount of work proving the efficacy of giving vaccines by mouth, both as prophylaxis against and also as a cure of disease.

Large numbers of experiments have shown that animals can be rendered immune against live organisms to which they are very susceptible by a few doses of dead emulsion of the same bacteria given by mouth.

Moreover, **tests done among troops have very hopeful results as to the power of the same preparations to protect against infection from typhoid, dysentery, &c, in ordinary life, so that at the present time, both for prophylaxis and treatment, the oral vaccine is becoming an established factor and firms are engaged not only in this country, but on a much greater scale on the Continent, in the manufacture of these preparations in large quantities.**

The suspensions are not potentized in the full sense of the word, but owing to the minuteness of bacteria the total quantity present is very small indeed and probably corresponds to about a 2x or 3x of a Homeopathic remedy; hence they are very closely allied to your potencies.

4. Comparison with Hahnemann

Again, Hahnemann's work is being rediscovered, and a vast number of remedies prepared, though only in low potencies. An attempt is being made by the old school to form a complete Materia Medica, using as their base the various types of organisms, of which of course there are very numerous varieties.

To give you an example, the following is a quotation from the quarterly bulletin:

> *"The vaccine-therapist claims a multiple variety of cases in which the use of vaccines by subcutaneous injection is beneficial.*
> ***One must admit, however, that there are many conditions in which the administration of vaccine by injection is contra-indicated. Acute febrile cases and nervous patients who are hypersensitive may be mentioned as the more important examples.***
> ***It is not generally known that in staphylococcal and streptococcal infections oral vaccines, administered by the mouth in the same way as ordinary medicines, are equally if not more effective than vaccines given by injection.***
> ***Frequent visits for injections are unnecessary as the patient can easily take the oral vaccines at home at the times ordered by the practitioner.***
> *In the treatment of boils and carbuncles some striking successes have been obtained."*

Hahnemann realized well enough comprehended the fact that in Nature might be found an infinite number of remedies to meet all occasions that might arise.

> ***"When thousands of exact, and tireless observers, instead of one as hitherto, have laboured at the discovery of these first elements of a rational Materia Medica, what will it not be possible to effect in the whole extent of the endless kingdom of disease!"*** *- (para 122).*

These Nosodes may be looked upon as great cleaning powers improving the condition of a patient and in certain cases effecting a complete cure, in others so cleaning up the whole state that the patient, who before gave no response, now receives marked benefit from other remedies.

Such has been the success of the practical results of these preparations, that already more allopaths have used them than there are homeopaths on the Register in England; some of them have entirely discarded the syringe and the old hypodermic method of injection for the use of the Nosode, and one can see a distinct danger ahead if this practice spreads too widely without the control of a ruling body, as it should be used only by men who have had distinct training.

The existence of homeopathy in this country depends to an extent on its ability to cure cases where allopathy has failed.

In conclusion, I want to remind you of paragraphs which ended a paper I read to you in April 1920, which are as follows:

> *"Meanwhile it should be realized that science in a totally different manner is confirming the principles of Homeopathy. To Hahnemann should fall all the honour for having anticipated science by more than a century. The attitude today of the medical profession in general is one of regard towards homeopathy; but when, as is shortly certain to happen, it is generally recognized and appreciated that all modern research at the hands of allopaths is rapidly proving and drifting in the direction of Hahnemann's laws, then will homeopathy be acknowledged to be the wonderful science that it is. Let all the members of your Society see to it that they are proud to be amongst the pioneers; let them see to it that they do not err one jot from the fundamental laws of their great founder. For science is proving him in detail — the like remedy, the single dose, the danger of hasty repetition."*

5. 7 Group-Types

We are making every endeavour to replace the bacterial Nosode by means of plants and have, in fact, matched some of them almost exactly; for example, ornithogalum in its vibrations is almost identical with the Morgan group, and we have discovered a seaweed which has almost all the properties of the dysentery type, but there is yet one thing lacking, and that one point keeps us checkmated in the effort to avoid using bacterial Nosodes.

6. Potentising and Polarity

This vital point is polarity: The remedies of the meadow and of Nature, when potentized, are of positive polarity, whereas those which have been associated with disease are of the reverse type, and at the present time it seems that it is this reversed polarity which is so essential in the results which are being obtained by Bacterial Nosodes.

Perhaps at some future date a new form of potentizing may be discovered, which will be capable of reversing the polarity of the simple elements and plants, but until that time comes we have no alternative.

The beneficial effect of these Nosodes is now accepted internationally, and the daily amount of good which is being accomplished in the fight against disease is on an enormous scale, so that it does not seem that this benefit should be withheld from humanity until such time as we may have found a particular method of combating the Psora of Hahnemann by a means which will fit in with the aesthetic mentality of the most fastidious type. Infinitely more important it is that this work should be acknowledged as a continuation of that of Hahnemann, and though not in itself perfect, as leading the way to further discovery.

Its growth and development should be watched and directed by the homeopathic school, and not be allowed to fall into abuse in the hands of men who do not understand the fundamental principles on which it is established." - Dr Edward Bach, MD in "The Rediscovery of Psora", British Homeopathic Journal, January 1929.

The Problem of Chronic Disease

1. Intestinal Tract

"From the earliest records of medical history we find evidence that what we know today as Intestinal Toxaemia was consciously or unconsciously recognized, as evidenced by the drugs and remedies used by the earliest physicians, many of which were laxative and liver stimulating and hence intestinal cleansing in their effect. The alimentary canal must of necessity be of the utmost importance.

Its superficial area is greater than that of the skin surface of our bodies; moreover, it has the power of absorbing from that in which it is bathed — a property not possessed by our external surface in any similar degree; you may sit in a bath of potassium cyanide with no ill-effects, a very small amount of which would be fatal in the stomach; you may wash in water loaded with typhoid or diphtheria or other bacilli without harm, but if a microscopical amount enters the mouth the result may be serious or fatal.

2. Bacteria and Disease

The content of the tract is the fluid in which we live; from which we obtain our fluid and our food; it is to us similar to the water in which the unicellular amoebae moves. It is essential that it should be pure and contain the necessaries of life, and free from any substances which if absorbed may be harmful to the body and against which there is no protective mechanism.

It is surely one of the marvels of Nature that she has been able to cope with such diversity of intestinal content as that with which different races have tested her powers of adaptation.

3. Unnatural Food

Consider the varying diets of different countries; think of the vastly varied composition of the intestinal content as a result; and yet the races, generally speaking, survive. As yet the penalty is not death — merely disease; not extinction — merely degeneration.

4. A Suitable Diet

In all probability the human race was originally intended to live on raw material, the fruits and foods of the tropics, and the human alimentary canal was evolved to deal with such a diet; yet offshoots of that race have migrated to temperate climes and many nations live almost entirely on food which has been cooked, completely altering the intestinal content — and yet the race survives; but humanity does not escape entirely.

It may live, but it suffers; it suffers from a hundred and one diseases, from a lowered standard of health and strength and a loss of physical vitality.

When a race lives on unnatural food, the intestinal content changes chemically, physically and bacteriologically.

All these factors matter, but in people such as those with which we are dealing the bacteriological change matters most.

The chemical and physical characters can be brought somewhat within range of normal by a diet not too far removed from that of civilization by the addition of fruit, salad, &c., and by such means the extreme variance from the normal in both the chemical and physical condition can be remedied even within the limits of diets and select such food as will keep the intestine reasonably clean.

Where there has been an infection of long standing, or where the infection is deeply seated, the bacterial element will resist for at any rate a long time the improvement in the intestinal content, and other methods have to be devised to hasten its removal; hence the greater importance of the bacterial infection as opposed to the abnormal chemical and physical state, owing to the greater difficulty in correction.

Has it ever occurred to you what difference there is between the content of the large intestine of an individual living on raw food and one living on cooked food?

In the latter instance such as is met with in civilized people the content is foul in odour, dark in colour, alkaline in reaction; containing many products of putrefaction such as indol, and the bacterial content is composed of Bacillus Coli, streptococci and spore-bearing organisms.

Contrast this **with the healthy individual who lives on raw material.**

The large intestinal content is of no odour, light in colour, acid in reaction; free from putrefactive products, and the bacterial content consists of the lactic acid bacilli together with some Bacillus coli.

In many cases cure can be accomplished without alteration of even an unnatural diet, where no amount of dieting would give marked benefit, though I do not deny that the combination would be better and more lasting.

5. Vaccine Treatment

They may be the result, but I do maintain that **this group of organisms (lactic acid bacillus) are persistent in patients; that they are associated with chronic disease, and that by the use of preparations made from these bacteria**

themselves we have a most powerful weapon in the fight against chronic disease of all types.

I turn now to the consideration of these organisms, indicators of potential, if not of present, disease whenever they are found, and found they can be in the vast majority of our fellow citizens.

It may be asked why, if they are so deadly, is disease not always-demonstrable?

The answer is that **their immediate virulence is small, and bodies that start with a reasonable measure of health can face their toxins for years without apparent inconvenience.**

But as life advances with all its various stresses the strain of keeping back these organisms, or possibly the conditions which give rise to them, begins to tell, and presently there is a breach in the defences and obvious illness declares itself. The germs of which I speak are bacilli — Gram-negative, of the great coli typhoid group; the important point being that they are incapable of fermenting lactose — a point which distinguishes them from the Bacillus coli itself.

Their number is enormous, it must be understood that each group contains a host of varieties, differing from one another in some minute detail.

Bacteria Types

Non-lactose fermenting bacilli:

1. Dysentery
2. Gaertner
3. Faecalis alkaligenes
4. Morgan
5. Proteus
6. Coli mutabile

They are grouped according to their powers of fermenting certain sugars, and only a few sugars have been used so as to keep the number of groups small.

If an autogenous vaccine is used, the exact definition of the organism is of no importance for treatment, and the polyvalent throws a very wide net and contains many representatives of each class. **These, are the bacilli which for the most part are considered harmless, but which are really the indication and, if properly used, a means of cure of chronic disease.**

The clinical evidence of the power to cure is too well established to admit of doubt, and will be referred to presently, but the laboratory is accumulating evidence of a non-clinical nature which demonstrates **the connection between these organisms and disease.** By daily examinations of the faces of a patient it is possible, by recording the percentage of organisms present in the form of a chart, to show the relation between the condition of the patient and the percentage found. The ratio between the abnormal nonlactose-fermenting organisms and the number of Bacillus coli present.

Generally speaking, it is considered normal for coli alone to be present, but these abnormal bacilli may be found in anything from 1% to 100% of the total colonies obtained.

From the alteration in percentage during treatment it can be ascertained to a certain degree how well a patient is likely to respond.

As a general rule the organisms found remain true to type for any given case.

That is to say, Gaertner does not seem to change to a Morgan or a proteus.

If a patient's faeces are plated daily and the percentage of abnormal bacilli charted, it will be found that these are not uniformly present, but that they occur in cycles. Perhaps for a period the specimens are free, and then the organisms appear, rapidly rise in numbers, remain at the highest point for some time, and then diminish until they disappear.

The intervals of freedom from them, the periods of the positive phase of their presence, the highest percentage of them reached, vary in different cases, but the clinical condition of the patient bears a certain relationship to the curve of organisms present in the specimens.

More than one type of curve exists; there is a definite relation between clinical conditions and bacterial percentage, and as an example of this the most brilliant result after vaccine treatment occurs when there is a short negative phase followed by a higher and more prolonged positive phase than that which is the patient's usual routine. Those cases where there is little or no alteration from their usual type of course do not do so well. It is extraordinary how rapidly the bacterial content may alter. Perhaps after weeks of negative plating, within 36 hours the specimens may contain as high as 100% of these abnormal bacilli.

What happens to produce this result; whether it is a changed condition of the intestinal content or of the patient himself that causes this change gives room for much research, and when that problem is solved we shall have made a great advance towards the knowledge of the cause of disease. It is already established that the percentage of these bacilli in the specimens bears a direct relation towards the condition of the patient in his varying phases from a clinical point of view.

Another curious feature is the stability of a particular type of bacillus in a given subject. Over several years, no matter how often examinations be made and whatever the condition or disease of the patient, the particular type remains true.

It is rare to find more than one type in the same case, although this may happen in a small percentage. There are certain symptoms which occur more frequently with one type than with another, and it is not improbable, when further observations are made, that it will be found there is a close relationship between certain disease symptoms and definite types of these organisms.

Whether these organisms be the cause or result, they are - associated with chronic disease, and an enormous amount of benefit can be obtained by the use of vaccine made from them. This has certainly been proven conclusively during the last 12 years.

I have previously referred to the fact that the clinical evidence of the value of this method of treatment is sufficient to leave no room for doubt.

Hundreds and thousands of patients have been treated on these lines, by a considerable number of practitioners; by both hypodermic and potentized preparations; 80% of those patients have shown improvement (to place it at a moderate figure), some only a little benefit, the majority very definite relief, a good many brilliant results, and about 10% practically miracles.

Years of experience and experiments, the observation of thousands of cases, that I place this proposition; the co-operation and observation and experience of practitioners throughout the British Isles, who support this evidence.

Patients may be treated with vaccines of these organisms given by hypodermic injection, as has been done now for a considerable number of years.

> ***"Hahnemann shows that most chronic diseases, originating in a common source and being related amongst each other, a special class of remedies designated by Hahnemann "anti-psorics", should be used in the treatment of those diseases. This common source of most chronic diseases, according to Hahnemann, is Psora."*** *- in "The Chronic Diseases: Their Specific Nature and Their Homeopathic Treatment", 1889.*

The point I wish to stress is that as good, and I and others believe better, results are obtained by potentized preparations of killed organisms.

These have been in use for about 7 years, and extensively for the last 2 years, by homeopaths and allopaths alike, **and there are allopaths who have discarded the syringe for their use.**

These Potencies may be of 2 Varieties:

1. Autogenous
2. Polyvalent

An Autogenous preparation means that the bacillus of a particular patient is potentized and used for that patient.

A Polyvalent implies collecting organisms from some hundreds of patients, mixing together and potentizing the whole.

It is this preparation which has been submitted to you on previous occasions, as a Nosode worthy of your consideration.

The autogenous is of use only for the subject from whom it was prepared, or possibly any patient having an identical infection. The polyvalent, on the other hand, is prepared with the object of covering as many cases as possible.

It is hoped that by various tests it will be possible to ascertain whether the polyvalent, autogenous, or even a mixture of 2 or 3 strains, will be the perfect form of administration for any particular patient.

It is necessary, to give you the exact technical details of preparation so that any competent bacteriologist can prepare these potencies.

6. Preparing Nosodes

I. Autogenous Nosode:

Feces are plated on McConkey's ribipel agar, incubated 16 hours.

When this is done organisms grow as red, or white colonies.

If they ferment lactose with the production of acid, that acid reacts on the neutral red in the medium to give a red colony; if they be non-lactose fermenters no acid is formed, no action on the neutral red and the colonies grow white. Hence the only interest is in those colonies which after incubation are white in colour. Cultures made from white colonies, rejecting the coloured, on agar slopes, incubated 15 hours and sugar reactions determined to group the organisms.

One culture washed up in 2 cc distilled water Sealed and killed at 60° C. for 30 minutes.

Triturated with milk sugar, the whole in g or the whole in 99 grm of milk sugar.

This makes 1st decimal or 1st centesimal potency, according to the amount of milk sugar used. Further potencies are made by trituration up to the 6th c or the 12th x, and thereafter with the usual fluid mediums. Special care is necessary in sterilizing all apparatus used to free them of a previous potency. Dry heat of at least 140° C. for 15 minutes is probably more effective than steam or moist heat.

II. Polyvalent Nosode:

The Polyvalent Nosode is obtained by collecting cultures from several hundreds of cases; by adding them as they are obtained to a sterile bottle, and when a sufficient number have been reached 1 cc of the whole well mixed and shaken is potentized as above.

It is a link between the allopathic and homeopathic schools; discovered by a member of the allopathic vanguard, it is found to be in line with homeopathic principles.

I submit this Nosode to you as a remedy worth including in your pharmacopoeia; useful especially as a basic remedy in cases which fail to respond to ordinary drugs, or where no remedy is especially indicated, though its use need not be restricted to these cases.

The Nosode I submit to you is being tried in America and Germany, and in this country it is being used by a considerably larger number of allopaths than homeopaths. Some of the former, **who for years have been getting good results with the hypodermic variety of the vaccine, have completely discarded the syringe in favour of the potency.**

I believe that the proper use of this nosode is to regard it as a basic remedy, and I have no doubt that the most brilliant results will be obtained when it is followed by homeopathic treatment, matching the symptoms with the appropriate remedy.

The nosode is capable of removing a greater or less amount of a really profound basic trouble. Hence, brilliant though the results are which have been obtained by allopaths, in your hands they should be even better.

In the case of giving vaccines hypodermically it is almost essential to have an autogenous to get the best results; here **95% of the patients do much better on their own vaccine,** and only about 5% respond more definitely to the polyvalent; such is the success of the polyvalent that I **am inclined to think in some cases it is better than, and in a large majority of cases equally as good, as the Autogenous, though there probably will be always certain cases that will only respond to a personal nosode prepared from their own organisms.**

The nosode, the remedy prepared from the material of disease, antedated bacteriology and the vaccine; but the relation of the latter to the former is obvious.

To your school, pioneers in the clinical use of disease to cure disease, **I offer a remedy which is, I believe, potent against the deepest of all diseases, that Chronic Toxemia which Hahnemann divined and named.**

I am confirming and extending his work." - Dr Edward Bach, MD in "International Homeopathic Congress", London, 1927.

The Role of Bowel Flora in Chronic Disease

"The result of 20 years observations as physician and bacteriologist upon the role played by the non-lactose fermenting bacilli of the bowel in chronic disease. In 1880 the bacteriologist Eberth succeeded in isolating and identifying the B. typhosus - a non-lactose fermenting gram negative bacillus - and **it was easy to provide the experimental evidence of the role this played when found in the intestinal tract.**

From that date onwards other organisms were noted as present in the intestinal tract, and their isolation and identification as members of the coli-typhoid group easy to establish, but as they failed to give any experimental evidence of pathogenesis, they were dismissed as having no significance in the bowel flora.

The publication of the work by Bach and Wheeler, in "Chronic Disease, A Working Hypothesis", 1925. Their conclusions were in opposition to the then accepted theories, as the following quotation shows.

> ***"A point which we particularly wish to stress is that a non-lactose fermenting gram negative bacillus in the faeces, whether it falls into a known variety or not, may be the cause of Toxaemia even though it may not give rise to obvious lesions. In fact the great majority never do, nor can, cause locally anything more than at the most, a little mucous colitis or some affection of that nature. Vaccine therapy principles warrant the belief that if disease symptoms disappear or are much ameliorated after the use of a vaccine made from a particular organism, then that organism counts at least for something in the production of the disease symptoms."***

Acting on that assumption a polyvalent vaccine of all types of non-lactose bacilli from the bowel was prepared for hypodermic use, and the results of treatment of 500 cases of a variety of chronic diseases published.

The results are rather striking:

Swift and striking................15%
Gradual and excellent 65%
Some definite effect.............15%
Unaffected................................5%

Our conclusions are based on 10 years work, Bacteriological and Clinical.

Within the Homeopathic School the oral vaccine displaced the hypodermic preparation, and the potentized vaccine (nosode) the bacterial emulsion.

1. Observing the clinical symptoms present when a particular organism was identified in the bowel.

2. **Observing the clinical symptoms which were ameliorated or disappeared after the giving of a particular bowel nosode**, it was possible even at that time (after some 8 years work) to give some tentative indications of the pathogenesis of certain types.

After 20 years work, combining clinical and laboratory observations, I can with confidence record the pathogenesis of each of the named types on that list.

After 10 years work Bach and Wheeler invited as wide a testing as possible of both their conclusions and practice.

After 20 years of clinical and bacteriological research I hereby confirm their hypothesis, that the non-lactose fermenting gram negative organisms of the intestinal tract do have a role in the causation of chronic disease, and that in the bowel nosodes I find myself possessed of a new and powerful weapon for treatment.

The Morgan (Bach) group — which includes all the sub-types - **has action mainly on the vegetative system of the body: on the mucous membrane of the whole alimentary tract from the mouth to the anus, and the prolongation of the tract into the liver, it also acts on the mucous membrane of the whole of the genito-urinary tract.**

While internally it acts on mucous membrane, it has also marked action on the skin.

From the list you will notice that the main Morgan group has been subdivided into (A) Morgan (pure) and (B) Morgan-Gaertner.

Is there any clinical significance of this sub-typing?

In the laboratory technique introduced by Dr Bach the organism was named according to the sugar reaction at the end of 18 hours incubation.

An organism which produced acid and gas in Glucose only, irrespective of what happened thereafter, would be named Bacillus Morgan. In my laboratory observations I noted that some types thus named B. Morgan (Bach) remained true to the usual maximum period of incubation of 72 hours, and to this I gave the name B. Morgan (pure). In other cases after the initial 18 hour period a change was noted, so that at the maximal period of 72 hours the sugar reaction was that of B. Gaertner, and to this type I gave the name Bacillus Morgan-Gaertner.

All the members of the Morgan group have selective action on the liver, but there is a difference in the degree of action of the sub-types.

B. Morgan-Gaertner has been found in the stool more often in the case of acute inflammation of the gall-bladder, acute cholecystitis, and B. Morgan (pure) is usually associated with the more chronic phase of gallstones.

The more acute action of Morgan-Gaertner is also noted throughout the genito-urinary tract, but its main action is upon the kidney with the formation of renal calculus. B. Morgan has outstanding action upon the skin.

It is known that the bowel mucosa has its peculiar enzymes which act as a barrier to the bacterial invasion of the body proper.

It is reasonable to presume that the chain of reactions set up may affect these enzymes, and thus finally affect the Bowel Flora. On this hypothesis each of the bowel nosodes - products of bacterial cell activity - can be assumed to be a very complex structure of the nature of a mosaic with each of - the remedies in each of the particular groups forming the units which make the pattern.

It matters not if they are simple or compound, animal or vegetable each has a part in the completed structure.

Homeopathic potencies are capable of altering the flora of the bowel.

Metchnikoff advanced his sour milk theory - that the B. Bulgaricus found in sour milk could alter the flora of the bowel, and by supplanting harmful organisms promote good health and long life.

“A Treatise on the Transformation of the Intestinal Flora with special Reference to the Implantation of B. Acidophilus”, Yale University, 1921.

The work was conducted at the Sheffield Scientific School of Yale University.

The Conclusions are as follows:

1. B Acidophilus given in whey broth cultures in sufficient amounts (300 c.c.) can alter the bowel flora by suppressing or supplanting other organisms.

2. Lactose (sugar of milk) when given in sufficient quantities, 300 to 500 grams per day, can also change the bowel flora with the appearance and preponderance of B. Acidophilus.

3. Combining the administration of B. Acidophilus with lactose, comparatively small amounts were required to maintain the change in the bowel flora. (150 grams lactose and 150 c.c. whey broth)

> ***"The simple character of the new flora persists, so long as one or other diet or preparation is continued, but reverts gradually to the normal or usual mixed type within 5 or 6 days after a return to the basal diet."***

Keeping in mind the point made earlier in this paper - **that bacteria are peculiarly adaptable to environment, and indeed must train themselves to utilize whatever media is available in order to survive**, it is not difficult to explain the change of bowel flora under such a set of experiments.

If one made up a mixed culture of bacteria containing but a small proportion of B Acidophilus and inoculated this into whey broth to which lactose had been added, there would be an immediate reaction.

Subsequent plating would show that there was an overwhelming preponderance of B. Acidophilus even to the suppression of all other types.

In these experiments the conclusions reached must be my answer to the diet critic - that in a matter of days after the return to the normal basic diet, the bowel flora returned to what it was before.

The change was due entirely to the supply of sufficient pabulum.

The question arises as to the type of bowel flora present before the change over.

Whence cometh the non-lactose bacilli?

Were they present before, but in such small amounts as to escape attention?

I think the control examination made over considerable periods negatives this suggestion in numerous cases, and the general opinion would be **to accept the fact that the change is an example of Mutation of Bacteria.**

The role played by the B. Coli is generally considered to be a normal inhabitant of the large bowel, is little understood or even taken notice of.

From the moment the infant is put on to other than mother's milk, coliform organisms appear in the stool and persist throughout life in great numbers.

The Bowel Flora forms a Physiological Unit, and is not a miscellaneous collection of germs. In my working hypothesis I accept the fact that organisms which live together on the same media (in this case the intestinal tract), are either in symbiotic or anti-biotic relationship to one another, and if one can isolate a single type of organism and from the culture prepare and administer the potentized remedy (nosode), it may be possible to disturb the balance and set up a chain of reactions in the manner I have already described.

The bacteriologist must now accept the evidence of the physician that these organisms are pathogenic it means "originating disease", but I would modify this as meaning "associated with disease". I visualize the germs as being present, but not necessarily causing the symptom complex; the disease. Such an Interpretation is more Scientifically Correct.

Discussion

Dr Briggs - **"I must thank Dr Paterson for a series of interesting papers which has to a great extent influenced, my life during the past 10 to 20 years.**

I was an orthodox bacteriologist of the 1908 school and in those days we were all taught that the germ caused the disease and that was such a plausible explanation of disease that it was eagerly seized upon. We add the germ to the subject and we get disease. Fortunately we had a few deeper thinking people in the profession who saw beyond what seemed to be a really very plausible theory. Even today we think of the B. Typhus as the cause of typhoid. But, is it?

We know that so many people take it and never have the disease.

We had some some interesting results. For instance, I had one stool which was completely negative, i.e. showing no non-lactose bacteria: 1 week later it showed 100% non-lactose organisms and 3 days later it was back again completely negative. Well, we want to know the reason for that.

I looked up the clinical record in this case and found that the patient had not received any treatment in hospital but she had had a long string of remedies given at various intervals, from 24 hours, to 2 or 3 weeks, from the medical attendant before she had been admitted to hospital."

Dr McCrae - **"When I get a list of drugs referring to a particular subject, I always enjoy their examination from the point of view of their Electro-Physical relationships.**

In this work of Dr Paterson's therefore he has struck a law of relationship in the Bacteriological sphere which corresponds in a striking manner to the law of Electro-Physical relationships.

Dr Paterson has added evidence of great value to our annals of homeopathic research.

His meticulous work has pointed to a very remarkable laboratory technique which shows the influence of potency energy on the human body before any other customary laboratory investigation can do so."

Dr Julian - **"Again, it seems to me even although you can show in a diseased case that there is variation in the bowel flora, the explanation of the disease does not lie so much in the changes of the flora as in the conditions of the bowel which made those changes in the flora possible.**

That is to say, the patient is not ill because he has pathogenic organisms, but the pathogenic organisms are there because he is ill!"

Dr Brown - **"The question of food being able to alter the nature of the bowel flora. I think everyone will realize that, but there is one food which is particularly evident in that respect and that is sugar.**

Before Hahnemann's time, the consumption of sugar in Europe was comparatively low and the health of the people in general, apart, from specific infective diseases, was comparatively good.

With the introduction of sugar to the diet at the time of the Napoleonic Wars, a large group of diseases began to appear.

In 1819 in Britain, the consumption of sugar was about 18 lbs. per head per annum. In 1926 it was 106 lbs. per head per annum.

Appendicitis is said to have appeared as a disease at a time when the sugar consumption was about 60 lbs. per head per annum, about 1880.

If we consider the bowel flora associated with cholera and other intestinal disorders, it is of considerable importance to realize that when the sugar consumption reaches 3-4 ozs. per diem per person, the intestinal reaction is converted from normal alkalinity to intermittent or constant acidity.

An intestinal reaction which is perpetually acid must have an effect on the intestinal flora, as Normally the Intestinal Contents Should be Alkaline.

When sugar consumption reached 60 lbs. Per head per annum, appendicitis appeared as a disease and it is about that figure, roughly 3 ozs. per diem, that we get this change from alkalinity to acidity.

In connection with diet, it is of interest to take patients who have had the operation of appendicostomy performed. One can, by varying the sugar consumption , have a varying reaction. In our struggle to overcome the ravages of chronic disorders, we lose sight of certain foods in our bodies. In particular we lose sight of the fact that sugar has only recently become a part of our diet. The primitive races, who consume practically no sugar, are almost entirely free from the chronic disorders which affect the civilized races."

Dr Lees - **"I was interested in the cases reported by Dr Hamilton.**

All the cases had Mental Symptoms; but the other symptoms of each case were either Digestive or Skin.

This suggests that there may he an alternation of Skin and Digestive symptoms similar to the alternation we find with Asthma and Skin.

When we consider the individual (and we should be eternally grateful to Hahnemann that he always dealt with the sick individuals and not with the diseases), we find 2 quite different parts; the Head, and the Metabolic parts.

They stand opposite one another even in the it anatomical structure, and one part has a counteraction on the other if a worrying excitable person develops a duodenal ulcer, etc. This interaction should be held in mind.

Dr Brown and Dr Wilson both spoke about the effect of taking sugar.

Dr Brown emphasizing the difference of the bowel flora in primitive races and civilized peoples because the latter consumed so much sugar.

I think we must take into consideration here the quite different Mental Attitudes of these people as the nervous tension and pace of living in civilized countries affects the bowel flora."

Dr Boyd: **"I do think out of this discussion there has come one very clear issue put by Dr Julian and by some other speakers. I think the point at issue which I should just like to sum up is that there has been put forward the view that these organisms are pathogenic. At the same time there has been put forward the point of view that organisms cannot cause disease, i.e. that they cannot determine the pathogenesis. There is also the point by Dr Julian that the organisms may be accompaniments.**

They do not cause disease but they are present when the patient is ill. The other point, a practical one, is an opinion based on a great number of cases by the emanometer. I am quite convinced that the general nosodes as supplied, i.e. the Morgan Co., Morgan (pure) and so on which have been produced, I believe, by collecting a large number of cultures of the particular type and then by the potency eventually being made from these, are of much greater value than what I would call auto-nosodes. I have noticed repeatedly that if a culture is made when a patient is under the influence of a remedy, the auto-nosode has no permanent or continuous effect at all and I am almost dogmatic on it as I have come across it in so many cases. If the patient is under the influence of a remedy I find that the dose of the auto-nosode is merely antidotal. It is far better to get a culture potentized, give it, wait so long and then a second culture and tincture from it is much more likely to give effect. The auto-nosodes vary from day to day according to the state of the patient and therefore potencies from them are not apt to be of such general use as the general nosodes"." - Dr John Paterson, MD, in "The Role of Bowel Flora in Chronic Disease", The British Homeopathic Journal, January 1949.

> ***"Everyone now says that border-line sciences are important. Chemical reactions have long been studied in isolation: in a cell these reactions occur in a co-ordinated manner, and in particular the autosynthetic process assumes a dominant role.***
> ***The question whether any of the modes of thought and work to which the chemist is accustomed in dealing with inanimate systems help in understanding the behaviour of the living cell is one which must be asked unless the traditional method of proceeding from the known to the unknown is abandoned.***
> ***If the answer is negative Nature will not hesitate to give it, but it is better to be put in one's place by her than by any other authority."*** *- Sir Cyril Norman Hinshelwood, 1956 Nobel Prize in chemistry, in "The Chemical Kinetics of the Bacterial Cell", 1952.*

Chapter 11

The Gut-Brain Axis

"There is no doubt that research in the last decade has established a link between Gut Microbiota and Brain Function. There is substantial buzz about the bidirectional nature of these seemingly infinite relationships.

We have learned several things:

1. Gut Microbiota are important to healthy metabolism and brain function.
2. Gut-Brain communication pathways include neural connections.
3. Gut Microbiota are significant during early development and can influence the wiring of stress circuitry in the Brain.
4. Probiotics (good bacteria), have been shown in animal and human studies to have a beneficial impact on mood symptoms.

Microbiota (an important modulator of health), must be considered as one component of a complex, multifaceted communication system needed to establish a healthy balance for brain development and function.

Thus, Gut Microbiota are important to healthy brain development.

In particular, Microbiota may influence the development of Brain regions involved in our response to stress, and control stress-related conditions such as: Anxiety and Depression.

Having established connections among Gut Bacteria, the Brain, and Behaviour, it is intriguing to consider the ways that microbiota may communicate with the Brain.

Classical thinking tells us that there are neural connections from the body to the Brain through Peripheral Nerves, and, in particular, the Vagus Nerve, which provides information from the Gut to the Brain.

Commensal Bacteria play an important role in maintaining the integrity of the Intestinal Tract, and in situations of stress or disease, increased intestinal permeability can contribute to increased inflammation.

Increased Intestinal Permeability (Leaky Gut), can lead to translocation of bacteria out of the lumen of the GI tract across the intestinal layer.

This is an additional pathway that microbiota, and pathogenic bacteria use to communicate with the brain via the Immune System or through activation of local neurons in the Enteric Nervous System (ENS).

The Enteric Nervous System is a part of the Autonomic Nervous System that is housed in the Gut, and is responsible for gut motility and other normal gut functions. It is a vast network of Neurons that are the first points of contact for Microbiota in the Intestinal Lumen and are an important component of the Brain-Gut Axis." - in "Gut Feelings: Bacteria and the Brain", Cerebrum, 2013.

The Link Between Gut Bacteria and Neurodegenerative Diseases

“The Intestinal Microbiota influence neurodevelopment, modulate behavior, and contribute to neurological disorders.

Parkinson’s Disease (PD) represents a growing health concern.

Antibiotic treatment ameliorates, while microbial re-colonization promotes, pathophysiology in adult animals, suggesting that postnatal signaling between the gut and the brain modulates disease.

Oral administration of specific microbial metabolites to germ-free mice promotes neuroinflammation and motor symptoms.

Colonization of mice with microbiota from Parkinson’s Disease-affected patients enhances physical impairments compared to microbiota transplants from healthy human donors.

These findings reveal that gut bacteria regulate movement disorders in mice, and suggest that alterations in the human microbiome represent a risk factor for Parkinson’s Disease.

The observation that gut bacteria from Parkinson’s Disease patients compared to healthy controls enhance motor deficits in a mouse model provides evidence for a functional contribution by the microbiota to synuclienopathies.

We provide evidence that the gut microbiota are required for postnatal events that promote hallmark motor deficits in an animal model.

What Causes Dysbiosis in Parkinson’s Disease?

Physiological functions in affected individuals, such as altered intestinal absorption, reduced gastric motility, or dietary habits, represent factors that may change the microbiome.

Epidemiological evidence has linked specific pesticide exposure to the incidence of Parkinson’s Disease**, with some pesticides known to impact microbiome configuration.**

Metabolites produced by a deranged microbiota may enter the circulation (or even the brain), and impact neurological function.

Certain neurologic conditions that have classically been studied as disorders of the brain may also have etiologies in the gut.” - in “Gut Microbiota Regulate Motor Deficits and Neuroinflammation in a Model of Parkinson’s Disease”, Cell, 1 December 2016.

"In order to maintain health and ward off disease, people needed to carefully monitor their intake of food, habits of sleeping and waking, physical exercise, frequency of "excretion" (urination and defecation), access to clean air, and regulation of sexual activities and "passions" (emotions).

The stomach was accorded a primacy among the bodily organs reflective of its importance in sustaining life as the seat of digestion. In this humoral paradigm, the process of digestion was seen as the direct instigator of sleep.

Eighteenth-century neurologist Robert Whytt (1714–66) developed the concept of nervous "sympathy" to explain how the organs of the body interacted with each other, thereby creating a mechanism for a brain-gut connection in Neurology.

Digestion and the Causation of Sleeplessness

The role of the gut as an instigator of sleep loss has a long history.

In the 18th century, William Cullen observed:

> ***"Persons who labour under a weakness of the stomach, as I have done for a great number of years past, knowing that certain foods, without their being conscious of it, prevent sleeping."*** *- in "The Croonian Lectures on Functional Derangements of the Liver," Lancet, 1874.*

In the early 19th century, Sir Henry Holland expounded:

> ***"No rules are more important than such as apply to the relation between digestion and sleep."*** *- in "Medical Notes and Reflections", 1840.*

By the 1870s, the eminent Sir Dyce Duckworth was confident in declaring:

> ***"Dyspepsia is not only one of the commonest, but also one of the least recognised, of the causes of loss of sleep; and amongst reasons for this statement are the facts that the symptoms of digestive disturbance are sometimes, indeed frequently, not appreciable, or not at all prominent, at the time of retiring to rest; and also, that the diurnal digestion may be in a comparatively vigorous state. Most persons are familiar with acute dyspepsia as occurring in the night, and supervening upon errors of diet; and in such cases a disturbed sleep is rudely broken by an attack of cardialgia or acid vomiting."*** *- in "Observations on the Causes and Treatment of Certain Forms of Sleeplessness", 1874.*

Ian Miller has argued that:

> ***"They confirmed the long-standing view (which stretched back to Hippocratic-Galenic medicine) that there was an intimate relation between the stomach and the psyche that was far from being laid to rest by mechanical models of the stomach or pathological systems that emphasised brain and nerves.***
> ***The ongoing linking of poor gastric health with the mind, supported by Abernethy and others. Coleridge recorded in his diary that his chronic stomach disorder had affected his nervous powers. Being unable to call Coleridge's attention to its pain while asleep, Coleridge's stomach had offered a stark reminder of its turmoil by producing a horrifyingly vivid dream via the nervous system."*** *- in "Bellies, Bowels and Entrails in the Eighteenth Century", 2018.*

But how exactly was indigestion believed to be acting to cause sleeplessness?

And how might this fit in with physiological theories about circulation, nerves, and sleep causation?

While searching for one coherent explanation in the cacophony of medical writings on sleeplessness would be an impossible task, sleeplessness and indigestion often occupied the same conceptual space.

To that end, English physician Joseph Mortimer Granville's formulation of "Visceral Consciousness" illuminating the connections between the brain and gut in paradigms of sleep loss.

Granville argued one of the most common physical causes of sleeplessness was what he described as "visceral consciousness" — or "mental impressions arising in connection with one of more of the visceral organs," often in the form of pain, bloating, flatulence, or other discomfort.

These messages of pain would then be relayed to the brain via the nervous system. In short, it was often the body, not the brain, that was the problem in the case of sleep loss.

Granville's conception of the brain-gut connection emerged from a longer history of thinking around "gastric sympathy."

Like medical writers earlier in the century, Granville perceived the connection of physically separate organs in the body, particularly the brain and gut, in terms of a "nervous sympathy": the spinal cord relayed messages from the viscera to the brain, which could prompt sleep disturbance or even unwelcome dreams depending on the state of the digestion.

Granville believed that the viscera would "awake" before or even independently of the brain — meaning that abdominal pains or dyspepsia, communicated via the sympathetic nervous system, could lead to sleepless nights without the patient even being consciously aware of the source of the problem. Like many of his contemporaries, Granville was convinced that the digestive system could block patients from sleeping either as a result of this "sensibility" or because of the negative effects of fermentation.

He observed:

> ***"The presence of undigested food in the stomach is a common cause of sleeplessness. There is no greater error than to suppose that general, and really refreshing, sleep can be obtained while the digestive organs are busy with food."*** *- Granville in "Sleep and Sleeplessness", 1879.*

The result of trying to sleep while the digestive organs were busy at work was unusual dreams, headaches, pain, irritation, and flatulence — all of which were calculated to disrupt repose.

Overloading of the digestive system was sure to "set up irritation," which, passed along the nervous system, disturbed sleep.

Granville advised his readers to be mindful of leaving sufficient time between dinner and bed so that digestion could be completed before taking their rest—avoiding disruptive fermentation of food left over in the stomach.

This meant that people needed to know how long different foods might take to leave the stomach, for which he turned to the work of the "father of gastric physiology," American Army surgeon William Beaumont (1785–1853).

Eating the wrong foods at the wrong time often resulted in one of the most common, and potentially most embarrassing, causes of sleeplessness—flatulence. Constipation was also commonly linked with sleeplessness.

The "torpid" bowel interacted with the wakeful mind in numerous ways.

First, frazzled nerves meant that the nervous system was no longer able to enliven the digestion and leading to an eventual stasis of the bowels.

Second, the distention and irritability of the bowels might act more directly by disrupting the circulation.

Finally, Constipation might itself instigate sleeplessness through a process of "Auto-Intoxication," whereby accumulated fecal material would begin to rot and its poisonous emissions were absorbed into the blood stream.

In "Acute Toxemia," this overloaded blood would in turn affect the proper functioning of the brain and hinder sleep.

Brown appealed to his readers that the common experience of headache as a result of Constipation, was proof enough of this intimate connection between congested bowels and the brain.

Indeed, constipation might act to set up the dyspepsia that so many authors linked with sleep loss by contributing to congestion in the liver.

Brown recommended practitioners to begin their attack on sleep loss at the liver in order to purge the digestive system.

Other suggestions included regular enemas and live cultures such as those found in yoghurt to counter "intestinal stagnation."

Diet and Hygiene in the Treatment of Sleeplessness

While the digestive system was often perceived as the cause of sleep loss, it was also through the bowels that a cure could be found.

By the early 19th century, Sir Henry Holland asserted that:

> ***"A great source of inequality and disturbance in sleep is doubtless to be found in the state of the viscera."*** *- in "Medical Notes and Reflections", 1840.*

To tackle sleeplessness, Holland recommended **wholesome diet and "supper at bedtime" in order to remove "irritation" of the viscera, and hence the undue excitement of the nervous system."** - in "Visceral Consciousness; The Gut-Brain Axis in Victorian Sleep and Sleeplessness in Britain and America, 1850-1914", Bulletin of the History of Medicine, 2021.

The Influence of the Microbiome Upon Health And Disease

"The effect of food choices (nutrition), on the commensal flora, and its influence upon the organs and tissues.

The importance, and role of commensal flora in the treatment and prevention of disease.

Special interest upon the microbial populations of the:

1. **Mouth**
2. **Skin**
3. **Respiratory Tract**
4. **Gastro-Intestinal Tract**
5. **Genito-Urinary Tract**

When he presented his reflections on "Neurasthenia, or Nervous Exhaustion" for the first time, in a lecture to the New York Medical Journal Association in 1869, he opened by stating that Neurasthenia, literally meaning 'want of strength in the nerve', was one of the most common causes and effects of disease at the time.

He compared the condition to anemia, arguing that:

> ***"Anæmia is to the vascular system what Neurasthenia is to the nervous.***
> ***The one means want of blood; the other, want of Nervous Force."***

This "Want of Nervous Force" and Exhaustion of the Nervous System could, according to Beard, lead to the development of a vast range of symptoms, including:

1. **Tiredness.**
2. **Headaches.**
3. **Palpitations.**
4. **Anxiety.**
5. **Depression.**
6. **Sexual Impotence.**

The general clinical examinations did, however, rarely reveal any pathological findings. Since the late 1980's Neurasthenia has also figured in debates, where it has been suggested as a historical forerunner of several contested diagnoses of our time, most notably: Chronic Fatigue Syndrome (also called Myalgic Encephalomyelitis / ME).

Neurasthenia in its heyday, in many cases Was Perceived as a Disorder which Was Closely Associated With The Gut.

Several physicians reported that Gastrointestinal Complaints Constituted a Predominant part of the clinical picture in many Neurasthenic patients, and some of these physicians felt the need to define a sub-entity of the wide neurasthenia diagnosis.

Nerve-gut interactions in neurasthenia contain several elements that may be seen as important historical precedents for the current debate about the Brain–Gut Axis in functional gastrointestinal disorders.

Digestive symptoms played a part already in the earliest writings on American Neurasthenia; George Beard as well as Edwin van Deusen mentioned Dyspepsia as one of the most common complaints in their first papers on this condition.

Beard's attention towards this part of the neurasthenic picture grew throughout the following years, and in the text that came to be the first standard work on Neurasthenia, "A Practical Treatise On Nervous Exhaustion", 1880, he elaborated on the topic and described "Nervous Dyspepsia" (also referred to as "Dyspepsie Asthénique") as one of Neurasthenia's core characteristics.

According to Beard's experience with neurasthenic patients, Nervous Dyspepsia was in many cases "the first noticeable symptom of nervous exhaustion", and "the earliest sign that the body is giving way."

The way he saw it, a Functionally Disordered Stomach could be the only sign of Neurasthenia for several years, Before Nervous Symptoms Began to Develop in other parts of the body. Nevertheless, he insisted that nervous dyspepsia should be seen as a part of "the same general pathological condition as all the orders of symptoms here noted", and as symptoms which might "follow or accompany as well as lead this multitudinous army" of other neurasthenic symptoms. The first to coin the term neurasthenia gastrica, or gastric neurasthenia, was possibly also an American physician.

In a lecture to the Rhode Island Medical Society on 15 September 1880, William F. Hutchinson presented "Three typical cases of neurasthenia".

In one of these cases, which was presented under the headline 'Gastric Neurasthenia', the patient was a 47-year-old widower from New York.

Among the clinical features noted, was a **"facial expression anxious in the extreme, with dark circles around eyes", and his general appearance was described as "bad."**

Moreover, he was described as "nervous to a distressing extent", and as a person who "sheds tears upon any sudden emotion, and finds it impossible to keep still a moment".

The patient's most bothersome complaints, however, were located to the gastrointestinal tract:

> *"After drinking a large quantity of lager beer, some dozen glasses or more', the patient had been* ***'attacked with severe nausea and long continued vomiting', which later developed into a chronic 'congestive irritation of the entire digestive apparatus, attended by obstinate constipation."***

The following year, an abstract of Hutchinson's paper was presented to German medical readers through the "Schmidts Jahrbücher der in-und ausländischen gesammten Medicin", 1881.

The abstract – and the disease label in particular – caught the attention of Rudolph Burkart, who at the time worked as the physician-in-charge at the water cure resort (or Wasserheilanstalt) of Marienberg.

During this practice, Burkart had noticed that a large number of his neurasthenic patients presented with stomach complaints as a predominant part of their clinical picture.

Wilhelm von Leube, who a few years before had published his first paper on nervous dyspepsia (Ûber nervöse dyspepsie. Deutsches Arch. f. klin. Medizin. 1879). According to Leube, the symptoms of nervous dyspepsia were due to a local affection of the gut; a 'direct mechanical irritation of over-sensitive nerves'

Some symptoms seem to have been perceived as more common and typical for neurasthenia gastrica than others. Among these were a feeling of 'fullness' or pressure in the epigastrium (upper part of the abdomen), epigastric pain and a sense of 'burning' in the stomach, in addition to heartburn, nausea and 'eructations of inodorous and tasteless gas'.

These gastric symptoms were typically reported to be aggravated by intake of food.

Other authors suggested that certain kinds of food generally did cause more trouble than others.

In 1912 John Honeyford stated that:

"In most cases of gastric neurasthenia the carbohydrate portion of the food is not sufficiently acted upon"; in other words suggesting an impaired digestion of carbohydrates.

Honeyford also pointed to **'highly seasoned dishes, smoked and cured foods, sauce and condiments' as 'indigestible' foods which would aggravate symptoms.** Although suggested by the name, the symptoms of neurasthenia gastrica were not limited to the stomach.

Symptoms from the intestines were also reported as quite common, constipation in particular, but also sensations of 'fulness' or pain in different regions of the abdomen, flatulency and variable/ abnormal stools.

Moreover, as was noted already in the works of Beard and Burkart, a number of authors also reported that **the gastrointestinal complaints of neurasthenia gastrica in many cases were accompanied by symptoms apparently 'remote' from the digestive tract.**

For instance, J. Campbell McClure **pointed to tiredness, inability to concentrate, capricious memory, headaches, palpitations, sleeplessness as well as vague pain in muscles and joints, as some of the most common non-gastric symptoms associated with gastric neurasthenia.**

Robert Coleman Kemp made particular mention of 'a sleepy feeling, or even weakness or dizziness', and 'marked mental depression' as commonly associated symptoms, while Charles D. Aaron reported that **"fulness of the head, cephalalgia, migraine, inability to work, vertigo, lassitude, insomnia, hypochondriac and melancholic illusions," were some of the most common general symptoms of Gastric Neurasthenia.**

In the understanding of how general neurasthenia could develop with such a wide range of symptoms, the two most essential elements were 'loss of nerve power' and 'morbid exaltation of nervous sensibility', often condensed to 'irritable weakness' or, in German, 'reizbare Schwäche'.

Correspondingly, the basic understanding of the disease mechanisms of gastric neurasthenia, was that the manifold symptoms were caused by an increased irritability and marked weakness of the nerves innervating the stomach.

However, according to several physicians, the irritable weakness of the nerve-supply of the stomach might just as well develop 'in a fit constitution after the excessive expenditure of nerve force'. Some of the most commonly suggested factors suspected to drain the nervous system of energy, were overwork, worry, emotional excitement, 'overstudy' and other forms of mental over-exertion.

According to Dr John Harvey Kellogg, Superintendent of the Battle Creek Sanitarium:

> ***"Overactivity or too prolonged activity of the brain, especially worry and harassment of the mind, unquestionably excite the abdominal brain to a harmful degree and lead to gastric and other visceral disturbance."*** *- in "Neurasthenia or nervous exhaustion", 1915.*

Moreover, neurasthenia gastrica was observed to develop in the aftermath of other diseases, such as influenza, malaria or venereal disease. Reflex irritation from other organs of the abdominal cavity – predominantly the uterus, was also described as a common cause. In 1915, Captain J. Campbell McClure pointed to the ongoing war as a particularly common cause of gastric neurasthenia.

As physician to the Red Cross Clinic for Physical Treatment of Officers in London, he had seen 'several cases in which the foundation of a neurasthenia of a definitely gastric type was laid during the sieges of Ladysmith and Mafeking.'

He explained this by "the nerve-racking strain maintained for weeks, insufficient and coarse food, and the physical exhaustion of continued vigil', and found it conceivable that the war would continue to 'produce a large group of cases of this kind both in our navy and our army."

As to how **the different nerve centers could communicate with each other, and thus produce symptoms from several parts of the body when an 'irritable weakness' of the nervous system had developed.**

George Beard, for instance, based his views on **Reflex Theory**:

> ***"The body is a bundle of reflex actions. An irritation in one part is liable to produce an irritation in some other part."***

This was "true of all parts of the body", he continued, but he singled out the stomach as one of the most important of the reflex centers. McClure pointed to the importance of the exhaustion of the vagus centres, while William van Valzah, and J. Douglas Nisbet, on the other hand, assumed that the Communication Between the Gut and the Nervous System Occurred Primarily Through the Solar Plexus:

> ***"The solar plexus, receiving all the impressions from the abdominal and thoracic organs, is very intimately associated with the cerebrum. Through it sensation, thought, and emotion influence digestion. Through it and the pneumogastric nerves digestion affects the activity of the brain. It is the connecting link between the moral, the intellectual, and the vegetative life. It is this highest and greatest assemblage of sympathetic centers which unites the nervous symptoms of neurasthenia gastrica."*** *- in "The diseases of the stomach", 1898.*

The Solar Plexus was also in focus in the writings of Dr J. H. Kellogg, MD, who suggested there were actually 2 Brains to be considered in Neurasthenia, and they had the ability to mutually influence each other:

> ***"The region of the stomach is the seat of the solar plexus, the great Abdominal Brain which exercises a controlling influence over all the functions of digestion blood-Circulation, Elimination – All the Automatic Processes of Animal Life.***
> ***The Great Sympathetic Chain of Ganglia is the Center of the Organic life of the body.***
> ***Through the close Association of the Abdominal Brain and the Cerebrum there is an Intimate Connection Between Digestion and Mental Action.***
> ***It is through this Association of the Cranial Brain and the Abdominal Brain that Mental States Affect Digestion so Profoundly, and the Reverse."*** *- in "Neurasthenia or Nervous Exhaustion", 1915.*

Thomas D. Savill, physician to the West-End Hospital for Diseases of the Nervous System in London. In his Clinical Lectures on Neurasthenia (1899), Savill was, for his own part, convinced that Neurasthenia in the majority of cases was a result of a (primary) Gastric Disorder, and he explained why he had come to this conclusion.

After careful history-taking of 102 of his own Neurasthenia patients, he had found out that as many as 74 of these patients had experienced symptoms of "gastric derangement" prior to the development of other symptoms of Neurasthenia. Moreover, his experience was that when patients were efficiently treated for their Gastric Problems, their neurasthenic symptoms faded as well.

Savill's explanation was that gastric disturbances might produce neurasthenia via an "Autointoxic condition of the blood", in which the 'Toxic products of digestion may have a specifically poisonous effect on nerve structures'. (Clinical lectures on Neurasthenia, 1899).

He was not the only one to think along these lines. **The theory of Intestinal Autointoxication, commonly ascribed to the French physician Charles Bouchard, was embraced by many medical doctors during the latter half of the 19th century, and was a commonly suggested disease mechanism for a wide range of disorders.**

At its core was the assumption that Toxic Putrefactive Products of Digestion could cause systemic disease after being absorbed from the bowel:

> ***"The absorption of Toxins from the Intestinal Canal – caused by changes in the digestive juices, by imperfect digestion, fermentation and by bacteria – constantly takes place, and is the chief cause in perpetuating the trouble."*** *- J. T. Wright, in "Neurasthenia", JAMA, 1905.*

The Toxic Products of Digestion were in turn assumed to impair "in varying degrees the anatomical elements of the different organs and notably the nervous centres." Thus, by toxic attacks on the nervous system, the products of a disturbed digestive process could produce not only the local symptoms of gastric neurasthenia, such as "laborious digestion", but also almost any kind of

the previously mentioned "remote" nervous symptoms commonly associated with the condition, such as exhaustion, headache, insomnia, palpitation and melancholia. In 1891 the French physician Champagnac claimed that autointoxication was the true 'point of departure' of neurasthenic disturbances, and two other French physicians, Gilbert Ballet and Adrien Proust, ranged it as the **most important of all the modern 'theories, which ascribe the origin of the neurasthenic conditions to disorders of the gastric functions'.**

In Neurasthenia, the process of Intestinal Autointoxication was often perceived as being associated with, and facilitated by, a flaccid (atonic) stomach.

A weakness and loss of tone in the stomach walls was assumed to lead to poor motoric function (peristalsis), with constipation as a possible consequence.

"Intestinal Stasis" was in turn assumed to contribute greatly to an 'imperfect' process of putrefaction and, consequently, Intestinal Autointoxication.

Gastric Atony [Gastroparesis] (condition where stomach muscles fail to contract normally, causing severely delayed food emptying without physical blockages), was also reported to be associated with a dilatation of the stomach. Moreover, **Gastric Atony** was reported to be a common characteristic of the Neurasthenic Stomach, in its own right. For instance, in 1917, when describing his experiences with soldiers who had developed neurasthenia during the war, J. Campbell McClure pointed to **Gastric Atony as a condition which at the time was 'a source of considerable trouble to those who are dealing with war neurasthenics'.**

He told that during the past 2 years, he had met:

> *"A large number of soldiers suffering from neurasthenia, either with or without a definite history of shell shock, who, in addition to the physical exhaustion and psychasthenia common in these cases, have suffered definitely from sensations referable to the abdomen, such as aching in the left hypochondrium, pain in the epigastrium, a sensation of constriction in the lower sternal region, and a general feeling of sinking referred not only to the epigastrium but perhaps to the whole abdomen."*

In addition, the soldiers frequently suffered from loss of appetite and a feeling of distention of the stomach after eating, which could persist for several hours.

An X-ray examination of the stomach did, according to McClure, in the majority of cases show "a stomach slightly more capacious than normally and rather slow to empty." He distinguished between two classes of such cases, with slightly different underlying mechanisms:

> *"In the former class, who recover quickly and apparently completely after suitable treatment, I believe that the gastric atony is due to over-influence of splanchnics. In the latter class, whose convalescence is long and too often incomplete,* ***it appears likely that the nervous fault which produces the gastric atony is failure of impulses due to exhaustion of the vagus centres."***

As for the actual cause of gastric atony in these cases, McClure pointed particularly to the "emotion of fear":

> *"All these men have been subjected, apart from definite shell shock, to experiences which are exhausting physically and mentally trying. One has to remember in dealing with such patients at the present time that in the cases of the bravest man* ***the emotion of fear, or if we choose to call it so, of anxiety, is a contributing factor in the production of any condition of muscular and nervous weakness."*** *- Campbell McClure J., in "Gastric atony and war neurasthenia", Lancet, 1917.*

In 1903, Ballet and Proust concluded that "it seems certain that gastro-intestinal atony is more often the effect than the cause of the affection".

A few years later, however, the American surgeons MacLaren and Daugherty argued that gastric atony was 'the original cause of neurasthenia'.

Another suggested characteristic of the gut in gastric as well as general neurasthenia, was the so-called ptosis (sagging, downward displacement) of the stomach and/or intestines and other organs of the abdominal cavity, referred to as gastroptosis, enteroptosis, and visceroptosis, respectively.

Ptosis could be associated with gastric atony and was also described as a possible facilitator for Intestinal Autointoxication; the latter through 'stagnation' of the contents of the stomach and intestines.

It was also assumed that the descended organs could produce changes in the circulation of the various viscera of the abdominal cavity, with unfortunate consequences.

The physician who was usually credited for having been the first to describe a possible causal association between such "sinking of the viscera" and neurasthenia in the early 1880s, was the French physician Glénard.

During the following decades, several other physicians reported to have observed this abnormality in a number of neurasthenic patients, and some of them even went so far as to call it a "stigma neurasthenicum" – a distinct sign of neurasthenia.

One of them was the Canadian physician Hugh McCallum, who in 1906 stated that he looked upon "**ptosis of any of the abdominal viscera as a stigma of neurasthenia, and quite as pathognomonic of it as a sharp haemoptysis is of pulmonary tuberculosis."**

In a previous paper, he stated that as many as 90% of female cases of neurasthenia were "victims of visceroptosis", and he argued that the symptoms of visceroptosis were practically the same as those of neurasthenia – 'with or without local distress', which suggested a direct causal link.

Examples of symptoms of gastric neurasthenia which were also reported in visceroptosis, were a disturbed appetite, "a sense of fullness in the epigastrium, belching, acid taste" and burning pain in the epigastrium after eating.

The general nervous symptoms included "general weakness, changeable and

depressed moods, headaches and fulness of the head, vertigo, disturbance of sleep", and a number of other ailments (Ewald CA. The diseases of the stomach, 1900). Among the etiological explanations for the visceroptosis as such, were a "bad standing posture", "badly-fitting garments", high-heeled shoes and corsets, 'the imperfect use of the lower zone of the thorax, the absence of fat, and the want of tonicity in the abdominal musculature leading to defective intra-abdominal pressure'. In other words, as in the case of gastric atony, and other alleged abormalities of the neurasthenic gut, the nature and directionality of the relationship between these gastrointestinal conditions and the symptoms of gastric and general neurasthenia were in no way clear-cut matters.

In 1903, Ballet and Proust made the following summary of the situation:

> *"In short, the relations between dyspeptic states and neurasthenia may, we think, be summed up as follows:* ***"In the majority of patients suffering from nervous exhaustion the dyspepsia has merely the value of a symptom, but of an important symptom, since it may contribute largely to keeping up the neuropathic state. In certain cases – sufficiently numerous it seems – the disorder of the digestive functions has been the primary cause of neurasthenia; and it is against it that the treatment must principally be directed."*** *- in "The treatment of neurasthenia", 1903.*
>
> ***"There is no doubt that Massage Improves the Nutrition of the muscles and nerves, and favours a vigorous circulation, metabolism, and regular evacuation."*** *- Hemmeter JC., in "Diseases of the stomach", 1898.*

A more literal way of 'recharging' the nervous system could be performed through Electrotherapy. According to George Beard, electricity was one of 'the very best' remedies for the nervous dyspepsia associated with neurasthenia.

The therapy could take many forms; it could be general and directed towards the whole nervous system, or it could be more locally targeted.

One example of the latter, in the therapeutic recommendations for neurasthenia gastrica, was described by W. Fenwick:

> *"For the stomach a constant current of 3 to 5 milliampères is passed through the epigastric for 20 minutes daily, the negative electrode being applied over the lower dorsal region and the positive one immediately below the left costal margin." - Fenwick WS., in "Dyspepsia – its varieties and treatment", 1910.*

Other authors preferred 'direct electrisation of the organ by means of a metallic wire inserted into the ordinary stomach-tube', but Fenwick found this procedure 'unpleasant to the patient and tedious of application'.

Electricity could also be used as a remedy specifically targeted to relieve constipation, based on the following procedure:

> ***"One pole is inserted into the rectum and the other, consisting of a large metal disc, is successively applied to the surface of the abdomen at different points along the course of the large intestine. The interrupted current is to be preferred to the constant one, and each sitting should last for about half an hour."*** *- Fenwick WS., in "Dyspepsia – its varieties and treatment", 1910.*

Kemp argued along the same lines:

> ***"The diet should be abundant, the patient avoiding highly seasoned food, alcohol, strong coffee, and excessive smoking."*** *- Coleman Kemp R., in "Diseases of the stomach and intestines", 1910.*

Honeyford recommended a decreased intake of carbohydrates and an increased amount of proteins (fresh meat). Occasionally a 'fattening cure' was prescribed, particularly in severe cases associated with anorexia and weight loss.

A general advice given with respect to the intake of food, was that 'In every instance mastication must be thoroughly performed, a sufficient time be allowed for each meal, and no exercise permitted for an hour afterward.'

Moreover, s**everal authors, such as Riegel, emphasized the importance of so-called psychic treatment in neurasthenia gastrica:**

> ***"Psychic treatment is still more important than all these methods, for the personal influence of the physician is of fundamental importance in the treatment of these cases. Only if the patient has full confidence in the physician can we expect any good results."*** *- Riegel F., in "Diseases of the stomach", 1903.*

Hugh MacCallum, too, **stressed the importance of the 'training of the mind' for the patients.**

> ***"It has become my practice to reach certain patients by way of the printed page after failing with oral instruction. Often a passage from the Bible is more impressive than volumes of secular literature."*** *- MacCallum H., in "Gastric neurasthenia", British Medical Journal, 1906.*

One particularly popular therapeutic regime for neurasthenics in general, which included most of these elements to a smaller or lesser extent, was the so-called **'rest cure'** developed by the American neurologist Silas Weir-Mitchell.

The cure typically lasted from 6 to 8 weeks.

Strict bed rest, and isolation from family and friends were some of the key elements of the regime, in addition to overfeeding (a fatty diet mainly based on large quantities of milk), Massage and Electrotherapy.

The cure also had a moral element, and the personal qualities of the doctors and nurses in charge were important for a successful result. Weir-Mitchell's rest cure was also recommended for sufferers from gastric neurasthenia, and in cases of neurasthenia gastrica associated with visceroptosis, the Weir-Mitchell cure was described as 'the only proper treatment'.

In many cases of gastric neurasthenia the longlasting immobilization usually included in the Weir-Mitchell cure was considered to be harmful; particularly in those cases where gastric atony was assumed to be a part of the clinical picture.

In these cases, **immobility was thought to make matters worse and increase the gastrointestinal atony and associated constipation, and a 'partial rest cure', with Massage, 'passive movements' and faradic electricity was recommended instead.** The element of overfeeding in Mitchell's cure was another topic for debate when it came to the gastric form of neurasthenia.

As pointed out by McClure:

> ***"One has to remember that in all these cases there is present a stomach which has lost its tone in greater or lesser degree, which is unusually capacious, and which is very slow to empty. Rest in bed and over-feeding will not help this local condition."***

In those cases where **some kind of abnormality of the gastrointestinal tract was understood as the cause of gastric (and general) neurasthenia**, the therapeutic advice given was somewhat different. For instance, **when Intestinal Autointoxication was considered to be the primary problem, the aim of the treatment was to remove the source of Toxemia.**

This could be done by improving the 'elimination' and reducing the often associated constipation, by the means of 'Colonic Flushings'. Moreover, yoghurt was assumed to inhibit the toxic putrefactive processes of the intestines (Borgbjærg A. Combe: Bekæmpelse af Kvælstofforraadnelsesmikrober i Tarmen ved Indførelse af antagonistiske Mikrober. Ugeskrift for Læger, 1909). In some cases, a more radical and invasive mode of treatment option was suggested.

As pointed out by Campbell McClure:

> ***"In a certain small proportion of cases it may be even necessary, on account of long-continued and severe Gastro-Intestinal Toxæmia which resists any other form of treatment, to remove the colon and implant the ileum into the sigmoid, as recommended by Sir Arbuthnot Lane."*** *- Campbell McClure J., in "Neurasthenia gastrica", Lancet, 1915.*

Sir Arbuthnot Lane, was a British surgeon who became particularly associated with surgical treatment of Intestinal Autointoxication (Alimentary Toxæmia), and he also recommended this Treatment for Neurasthenics.

The Microbiome-Gut-Brain Axis

One interesting parallel is the understanding of the vagus nerve as having a crucial role in the brain–gut communication; which is acknowledged today, which was also (although more vaguely) suggested by some of the authors writing about neurasthenia gastrica.

Moreover, **the notion that we have an 'abdominal brain' which is interacting with our other brain, as was suggested in the debate about neurasthenia gastrica, would fit very well with the language in the current debate, where the enteric nervous system is frequently referred to as our 'second brain'. With the causal theory of Intestinal Autointoxication, the history of gastric neurasthenia also contains an element which may be seen as a historical forerunner of the present-day interest in the potential role of the microbes of the gut in the development of functional gastrointestinal (and other) disorders (The Microbiome-Gut-Brain Axis)."** - in "'Neurasthenia gastrica' revisited: perceptions of nerve-gut interactions in nervous exhaustion, 1880–1920", Microbial Ecology in Health and Disease, 2018.

The Microbial Organ in the Gut

"The innervation of the digestive tract is involved in determining the patterns of its movements, in the control of gastric acid secretion, in regulating movement of fluid between the gut lumen and body fluid compartments, in changing local blood flow, in release of gut hormones, in modifying nutrient handling and interacting with the gut immune system. **The gastrointestinal tract differs from all other peripheral organs in that it has an extensive intrinsic nervous system, the Enteric Nervous System (ENS), that can control functions of the small and large intestines even when they are completely separated from the Central Nervous System (CNS). But in reality the ENS is not autonomous. The neuronal control of gastrointestinal function is an integrated system in which local enteric reflexes, reflexes that pass through sympathetic ganglia, reflexes that pass from the gut and back through the CNS and central control systems interact.**

The Extrinsic Innervation of the Gastrointestinal Tract

At the gastrointestinal level, the mucosal surfaces are the first location where immunogenic particles, environmental toxins and microorganism-derived antigens gain access to the immune system.

The regulation of gut physiology is also achieved through the activity of both the Enteric Nervous System (ENS) and the Central Nervous System (CNS).

Enteric Nervous System is an extensive neural network, also known as the second brain, containing approximately 100 million neurons embedded in the gastrointestinal lining, similar number to the spinal cord. The ENS contains sensory neurons, inter-neurons, and motor neurons, which primarily control motility, absorption and secretion, but also visceral sensitivity. In addition, the Enteric Nervous System is wired with multiple terminals from ascending and descending Central Nervous System pathways that help to control gut function. To understand gut physiology and pathology, it is of particular importance to consider the role of the autonomic nervous system, and the Hypothalamic Pituitary-Adrenal Axis (HPA) because both systems also establish a vast and complex array of integrative and bidirectional interactions between the brain and the gut, the Brain Gut Axis.

Connections between the gut and the central nervous system can be conveniently classified as vagal, spinal thoracolumbar and spinal lumbosacral. Each of these includes afferent (sensory) innervation and efferent (motor innervation). The efferent pathways contain pre-enteric neurons that end within enteric ganglia and control or modify the activities of enteric neurons.

Pathways from the CNS also contain neurons that directly innervate a restricted number of gastrointestinal effectors, such as striated muscle of the esophagus (vagal innervation), sphincters (sympathetic innervation) and intrinsic blood vessels (also sympathetic innervation).

Vagal Innervation

The human abdominal vagus contains about 40,000–50,000 axons.

These fibers provide a sensory innervation and efferent (motor) control pathways for the upper gastrointestinal tract and digestive organs.

The afferents include mucosal mechanoreceptors, chemoreceptors and tension receptors in the esophagus, stomach and proximal small intestine, and sensory endings in the liver and pancreas.

There is a less prominent vagal afferent innervation of the distal small intestine and proximal colon.

Sensory information concerning luminal contents is detected by EEC cells which release hormones that act on vagal afferent nerve endings. This indirect chemoreceptor activation is important for the detection of nutrients and also potentially noxious agents in the gut contents. The functions that are regulated by the vagal sensory innervation include appetite and satiety, esophageal propulsion, gastric volume, contractile activity and acid secretion, contraction of the gallbladder and secretion of pancreatic enzymes.

Vagal Efferent Pathways

The vagal efferent pathways arise from the dorsal motor nucleus of the vagus and the nucleus ambiguus.

Most of these neurons are pre-enteric, that is, they form synapses with neurons in enteric ganglia, but some run directly to the striated muscle cells of the esophagus. The major roles of the vagal innervation are to control esophageal propulsion, to relax the lower esophageal sphincter for swallowed food to pass, to increase gastric capacity, to facilitate antral contractions, to relax the pylorus, to increase gastric acid secretion, to contract the gallbladder and to promote pancreatic exocrine secretion.

Throacolumbar Innervation

The thoracolumbar spinal cord connects with the gastrointestinal tract through spinal afferent neurons with cell bodies in dorsal root ganglia (DRG) and through sympathetic efferent pathways.**A high proportion of the afferent neuron endings is around arterioles in the gut wall.**

The axons of spinal afferent neurons also provide a sparse network of varicose axons in the myenteric ganglia.

Thoracolumbar afferent endings also branch within the lamina propria of the mucosa throughout the gastrointestinal tract, although their branching patterns have not been defined.

Rare thoracolumbar afferent fibers are found in the muscle layers.

As they pass through sympathetic prevertebral ganglia, the axons of spinal afferent neurons provide collaterals that form synapses with cell bodies of postganglionic neurons.

There is little evidence that pain comes from the healthy gastrointestinal tract. In fact, it seems remarkably insensitive to stimuli, such as cutting, that would cause pain elsewhere.

Gastrointestinal pain is associated with inflammation, and postinflammatory disorders. Experimental studies indicate that inflammation causes long term changes in the properties of spinal afferents, that causes unresponsive neurons to become sensitive and responsive neurons to become hypersensitive.

The sympathetic efferent pathways have 4 primary targets: myenteric ganglia, submucosal ganglia, blood vessels and sphincter muscle.

The preganglionic sympathetic neurons have their cell bodies in the intermediolateral columns of the spinal cord.

Postganglionic neurons of vasoconstrictor pathways are in sympathetic chain and prevertebral ganglia.

Postganglionic (pre-enteric) neurons with cell bodies in prevertebral ganglia provide a dense innervation of myenteric and submucosal ganglia.

In both cases these are inhibitory; the sympathetic innervation of myenteric ganglia inhibits excitatory effects of enteric neurons on the muscle of the stomach and intestine, thus slowing passage of the contents of the gastrointestinal tract.

The innervation of submucosal ganglia inhibits secretomotor neuron activity (see later section "Neural Control of Fluid Movement: Secretomotor and Vasomotor Reflexes").

Sympathetic post-ganglionic neurons contract the sphincters of the gastrointestinal tract, which, like the innervation of myenteric ganglia, inhibits transit of contents.

Pelvic Innervation

The distal colon and rectum are provided with afferent and efferent innervation via the pelvic nerves and sacral plexuses.

The pelvic nerves are commonly regarded as providing an innervation to the distal gut similar to that provided by the vagus to the proximal gut.

Neural Control of Fluid Movement: Secretomotor and Vasomotor Reflexes

It is essential that the movement of fluid between the lumen of the intestine and the body fluid compartments is regulated.

More than two blood volumes cross the mucosal epithelial surface each day, and disruption of fluid transport regulation, such as occurs in cholera intoxication, is life-threatening. One reason for the large flux is that the absorption of sugars (monosaccharides) and amino acids is through cation-coupled transporters.

Thus the absorption of a glucose molecule through the sodium/glucose linked transporter (SGLT) brings with it a sodium ion together with counter ions, mainly chloride. It is calculated that 100 gr of absorbed glucose takes with it 1.8 Litre of water. Enteric reflexes, through activation of secretomotor neurons, return water and electrolyte to the lumen. This fluid is drawn from the circulation and from the absorbed fluid. **Enteric secretomotor reflexes cannot act in isolation, they must be modulated to take into account whole body fluid balance.**

This control is exerted through blood volume and blood pressure detectors that change the activity of two sympathetic pathways, vasoconstrictor pathways and secretomotor inhibitory pathways.

The fine control of fluid balance through local (Enteric Nervous System) and systemic (sympathetic) reflexes is thrown into chaos when there is an excessive luminal content of certain pathogens or their toxins.

These agents, including Cholera Toxin, and pathogenic E. coli, activate enteric secretomotor neurons. **In mild cases, this stimulates diarrhea that helps expel the pathogens and their Toxic Products. When there are high levels of pathogens or toxins, the intestine is overwhelmed and a pathological, life-threatening hypersecretion can ensue. The hypersecretion results in copious diarrhea.**

The Enteric Nervous System and Gastrointestinal Innervation: Integrated

Neural control of the gastrointestinal tract is exerted by integration of signals that originate in the Central Nervous System and **Enteric Nervous System**. **Gastrointestinal function is maintained in the absence of influence from the Central Nervous System, but if Enteric Nervous System control of the intestine is lost, propulsion of content in the affected region is ineffective, which is life-**

threatening. Three major regions of the Central Nervous System connect with the gastrointestinal tract, the brain stem through the vagus nerve, the thoracolumbar spinal cord through spinal afferent and sympathetic efferent pathways, and the lumbosacral spinal cord through pelvic nerve afferent and efferent pathways.

Vagal afferents carry mechanoreceptive and chemoceptive information from the esophagus, stomach and intestine to the Central Nervous System, but do not signal pain. Thoracolumbar and lumbosacral afferents both signal pain of gut origin. In addition, there is cervical afferent innervation of the upper esophagus.

The primary control centers for the smooth muscle esophagus, lower esophageal sphincter, stomach, gallbladder and pancreas are in the Central Nervous System; they exert control through vagal efferent pathways.

The vagal neurons that control gastric motility, acid secretion and hormone release form synapses in the Enteric Nervous System.

The major efferent connections of sympathetic pathways are to myenteric ganglia, through which gastrointestinal movements are inhibited, to submucosal ganglia, through which fluid movement into the lumen is inhibited, and to intramural arteries that are constricted by sympathetic nerve activity. The efferent pelvic nerves convey the outputs of the lumbosacral defecation centers. The enteric nervous system consists of many thousands of interconnected ganglia that extend from the upper esophagus to the internal anal sphincter. These ganglia in human contain in total about 200–600 million neurons. Motor neurons in the enteric ganglia supply all major effectors in the gastrointestinal tract. In the small and large intestines, the Enteric Nervous System contains full reflex pathways that are essential to direct the movements of these parts of the digestive tract. Another critical role of the Enteric Nervous System, in concert with signals from the Central Nervous System, is whole body fluid balance. This is necessary because of the very large fluid load that is contributed to by water and electrolyte movement that is associated with nutrient digestion and absorption. The Enteric Nervous System contains a type of neuron not found anywhere else in the periphery. These are intestinofugal neurons, with cell bodies in enteric ganglia, that send their axons to sympathetic ganglia, to other organs (the pancreas, gallbladder and trachea), and to the Central Nervous System via the vagus and pelvic nerves. Thus the digestive tract is controlled through integrating centers in the brainstem, spinal cord, sympathetic ganglia and gut wall that are extensively interconnected through conventional afferent and efferent pathways and via the intestinofugal neurons.

The Vagus Nerve

The vagus (10th cranial nerve) innervates the pharynx, larynx and visceral organs. While it contains both motor and sensory fibres, it is the main afferent pathway from the abdominal cavity to the brain.

Information from the heart, lungs, pancreas, liver, stomach and intestines are delivered tonically to the brain via sensory fibres in the vagus nerve.

Sensory vagal inputs arrive in the Nucleus of the Solitary Tract (NTS) via the nodose ganglion which is chiefly made up of sensory visceral afferent fibres.

From there fibres ramify to widespread areas of the Central Nervous System, including the cerebral cortex and medulla oblongata.

There are 30,000–80,000 vagal afferent nerves that supply the intestine with a 9:1 ratio of afferent to efferent fibres in peripheral nerve bundles.

Vagal primary afferents innervate the muscular and mucosal layers of the gut with the coeliac branch supplying the intestine from proximal duodenum to the distal part of the descending colon.

Vagal innervation is densest proximally but is still significant in the colon.

The Vagus and Gut Bacteria

There is now strong evidence from animal studies that **gut microorganisms can activate the vagus nerve and that such activation plays a critical role in mediating effects on the brain and subsequently, behaviour.**

The field of microbial endocrinology developed out of need to understand the paradox in which stress resulted in increased death from a bacterial challenge at the same time greatly increasing the phagocytic activity of the immune system.

In considering the microbiota as an interactive player in the host that can both respond to signals from the host and influence the host through the provision of the very same host signaling molecules (i.e., neurochemicals) that are more commonly associated only with vertebrates, but in fact have a long evolutionary history involving the prokaryotes, the potential role of the microbiota in brain functioning and its potential for treatment of mental disorders becomes apparent.

A fuller understanding of the capabilities of the microbiota to interface with the brain and form the microbiota–gut–brain axis, but will also provide detailed examination of the consequences of the microbiota-driven gut to-brain communication for both health and disease.

> ***"If you are right that the bacteria in the gut can communicate with the brain and induce cognitive behavioral changes such as anxiety****, then why aren't all the patients we give antibiotics to in the hospital running around the floors crazy?" - NIH Director's Pioneer Award Study Section Member, July 2008.*

The spectrum of neuroactive compounds produced by bacteria that can potentially interact with the host also includes a number of neuropeptides.

That many of the described neurohormones produced by bacteria also function in mammals as part of the neurophysiological system suggests, that their production within the mammalian host can impact the neurophysiological aspects of the host including cognition.

What is still incompletely understood for the majority of bacteria from which neuroendocrine hormones have been isolated is the simple question of "why".

Why do bacteria produce neuroendocrine hormones?

There have been numerous reports since the 1930s regarding **the ability of specific bacterial species to produce and/or recognize through specific receptors neuroendocrine hormones many of which are involved in key aspects of neurotransmission. Given that bacteria are prolific producers of neuroendocrine hormones, as well as other neuroactive compounds, it would seem reasonable to conclude that such bacterial production of neuroactive compounds within the gut lumen could influence either host-specific neural receptors within the gut or extra-intestinal neuronal sites following luminal uptake into the portal circulation. There are a number of reports that provide support that neurochemical production by bacteria within the gut can influence behavior in both humans and animal** model systems. Most often, these reports employ probiotic bacteria, such as Lactobacillus or Bifidobacterium, many of which species belonging to these two genera are prolific producers of neurochemicals for which well-defined neural mechanisms are known by which behavior may be modulated. **Tantalizing evidence that microbial endocrinology does indeed play a role in microbiota-gut-brain interactions that ultimately culminate in changes in behaviour.**

If we are to understand how host and microbes together produce the full spectrum of health and disease phenotypes, we will need to determine which alleles are represented and expressed in the host, which microbes are present and where in the gut micro-environment the microbes are found and, for both host and microbes, how genes are expressed to produce metabolites within activated pathways. To understand the state of the human and microbial ecosystem in the gut, therefore, requires an accounting of an ecosystem of phenomenal complexity.

There are on the order of 3 billion base pairs in the human genome, but there are ~10 times more bacterial cells within the human body than bacterial cells and encoded within the genomes of those microbial cells is likely more than 100 times more distinct genes than are encoded within the human genome.

The importance of maintaining epithelial permeability tight to prevent the passage of noxious substances, was emphasized in the early 1990s, and reiterated by many authors thereafter." - in "Microbial Endocrinology: The Microbiota- Gut-Brain Axis in Health and Disease", 2014.

The Gut-Brain Connection: How it Works and The Role of Nutrition

"The communication system between your gut and brain is called the gut-brain axis. They're connected both physically and biochemically in a number of different ways. They influence each other.

The Vagus Nerve

Neurons are cells found in your Brain and Central Nervous System that tell your body how to behave.

There are approximately 100 Billion Neurons in the human brain. Interestingly, your gut contains 500 million neurons, which are connected to your brain through nerves in your nervous system.

The Vagus Nerve is one of the biggest nerves connecting your Gut and Brain.

It sends signals in both directions.

Neurotransmitters

Your gut and brain are also connected through chemicals called Neurotransmitters. Neurotransmitters produced in the brain control feelings and emotions.

Gut Microbes Make Other Chemicals That Affect the Brain

The trillions of Microbes that live in your gut also make other chemicals that affect how your brain works." - in "HealthLine", 20 August 2020.

Colon Cancer Metastasis to the Brain

"Some cases of Colon cancer can metastasize (spread) to other areas of the body, including the Brain. This occurs when cancerous cells break away from the tumour in the Colon, travel to the brain through the Bloodstream, or Lymphatic System and then begin multiplying within the Brain.

Less than 3% of patients with Colorectal cancer experience Brain metastases (it's much more common for Colon cancer to metastasize to the Liver, since the 2 organs are connected by a Large Blood Vessel).

Colon cancer is still one of the types of cancer most likely to cause Brain metastases (other types include Breast cancer, Kidney cancer, Lung cancer, and Skin cancer). People often mistakenly assume that someone with Brain metastases has Brain cancer. That's actually not the case.

When cancer metastasizes from one area of the body to another, the resulting tumours are still made up of cancerous cells from the original body part." - in "Colon Cancer Metastasis to the Brain", Moffitt Cancer Center, January 2025.

"It has become increasingly evident over the last 20 years that the Large Intestine is a highly specialised digestive organ, which through the activities of its constituent Microflora, rivals the Liver in metabolic capacity, and in the diversity of its biochemical transformations.

Approximately 90% of the 10^{14} cells associated with the human body are Microorganisms, and the vast majority of these reside in the Large Bowel.

The Colonic Microbiota consists of approximately 10^{13} cells which, with the possible exception of bacteria growing in the oral cavity, are physiologically very different to those associated with any other part of the host.

Several hundred bacterial strains and species normally exist in the large intestine, with viable counts typically being in the region of 10^{12} per gram of intestinal contents.

While host tissues and other substrates of endogenous origin (sloughed epithelial cells, mucins, pancreatic and other secretions), are continually being broken down and recycled by intestinal bacteria, the species composition and metabolic activities of the colonic microbiota are primarily determined by diet. Therefore, what we eat, particularly carbohydrate and protein, affects ecological, physiological and metabolic events in the large bowel. **Intestinal Microorganisms play a major role in health and disease, and affect human physiology in a multiplicity of ways. Large Bowel cancer along with Breast, Prostate, Lung, Endometrium, and Ovarian tumours are the leading causes of cancer mortality in the Western countries** (American Institute of Cancer Research, 1997).

In addition to these cancers, other Western diseases that also contribute significantly to morbidity and sometimes mortality, include:

1. Gastrointestinal Diseases:

Constipation, Hiatus hernia, Appendicitis, Diverticular Disease, Haemorrhoids.

2. Cardiovascular Diseases:

Coronary Heart Disease, Stroke, Essential Hypertension Deep Vein Thrombosis, Pulmonary Embolism, Varicose Veins.

3. Metabolic Diseases:

Obesity, Diabetes, Gallstones, Renal Stones, Osteoporosis, Gout.

The development of these disorders appears to be associated with life style and environmental factors of which diet is a major component." - in "Colonic Microbiota, Nutrition and Health", 1999.

Neurasthenia

"1. The majority of cases of so-called Neurasthenia are either victims of:

A. Nerve weariness dependent upon misdirected energy without proper rest at proper intervals.

B. **Nerve poisoning, the result of Constipation, improper food and accumulation of the Ashes of Combustion, Leucomaines and Ptomaines; a disposition to use the stomach too much and the rectum too little, and a failure to appreciate the importance of Pure Air as a Rejuvenator of tired and poisoned nature.**

C. Nerve demoralization resulting from unrelieved peripheral irritations.

2. There is less harm in the victim of disease directing his attention to special organs and peripheral points as the offenders of his comfort, than there is in having his mind absorbed in the contemplation of his nervous apparatus. In other words, it is an evil day for any one, man, woman or child, when the attention is concentrated upon the nerve centers, when the energies are directed toward watching the nervous symptoms; in fact, it would be well for them if they never had a knowledge of the anatomy and functions of their nervous system, and this knowledge should be the last presented to them for consideration.

The best way to cure the discomforts occasioned by nerve weariness and nerve poisoning, and even those of nervous exhaustion, which are far more serious, is to prevent them. Both on the part of the parents and children, we should teach them the importance of proper food, proper clothing and a properly opened condition of the animated system of sewerage.

We should impress them with the fact that the daily visit to the Temple of Cloaca, is as necessary as the morning and evening prayer.

When we recall the fact that 90%, of the women of the world are much more constipated than the traditional owl, we will realise what room there is for improvement in this direction.

A special missionary work should be entered into on the part of the profession among the teachers of our schools, **for they need not only to know the importance of the flushing out of the alimentary canal.**

All along the line **we are safe in keeping; The Cardinal principles both as Preventers and Curers of the condition mentioned:**

1. Elimination
2. Disinfection
3. Nutrition
4. Tranquilization
5. Oxygenation

Large Quantities of Pure Water Serve As Excellent Stimulators of The Eliminative Organs. Food that is Easily Digested and Readily Assimilated Is Important.

Under this head, butter and **milk stand pre-eminent.**

Sleep is indeed “tired nature's sweet restorer”, and it represents the life of the individual. Mothers should be impressed with the fact that children who are poor sleepers run the chance of growing up with wrecked nervous systems.

The average mother, as well as the average child, does not sleep enough.

Let us not forget that the majority of these cases, whether spurious or bona fide **Neurasthenia, Have Usually a Rotten, Crowded Condition of the Alimentary Canal, a long history of Constipation leading us up to Leucomaine and Ptomaine Poisoning and that the entire System of Secretory Glands is deficient and perverted in activity, and that the flushing out of the Emunctory System is called for.**

Change of Scene and Air are often indicated.

The elevated mountainous atmosphere, the ideal water and facilities furnished for drinking it in large quantities, and being hot it is all the more promptly eliminated, and at the same time **the Bathing in the Hot Water is Very Beneficial in the direction of relieving the pains which so frequently accompany these conditions. The judicious administration of Electricity is certainly indicated, but I am strong is the belief that more are benefited by discreet Massage."** - Dr I. N. Love, MD, in "Neurasthenia", Journal of the American Medical Association, 20 January 1894.

In Nature: Where There Is Balance; There Is No Disease

"In nature, where there is balance, there is no disease and the germ, in this case the B. Coli in the intestinal tract, performs a useful function.

Where the intestinal mucosa is healthy the B. Coli is non-pathogenic.

Any change in the host which affects the intestinal mucosa will upset the balance and will be followed by a change in the habit and the bio-chemistry of the B. Coli, which may then be said to become pathogenic, but it should be noted that the primary change, the disease originated in the host, which compelled the bacillus to modify its habit in order to survive.

I would ask you to keep this sequence of events in mind as a great deal of what I have to say about the Intestinal Nosodes is based upon this conception which I have confirmed by clinical and laboratory observations over the last 20 years." - Dr John Paterson, MB, ChB, DPH (Camb.), FF Hom., in "The Bowel Nosodes", British Homeopathic Journal, July 1950.

Viscero-Somatic and Somato-Visceral Spinal Reflexes

"In "Viscero-Somatic and Somato-Visceral Spinal Reflexes", Journal of the American Osteopath Assoc., 1907, Dr Louisa Burns, DO, observed that:

> ***"In the study of the physiology of the sympathetic nervous system it was noted that a lack of clearness was especially evident concerning the locality in which the viscero-sensory impulses affect the viscero-motor nerves. It occurred to me that a study of viscero-somatic and somato-visceral spinal reflexes might assist in determining***

> ***whether this co-ordination takes place chiefly in the sympathetic ganglia, or chiefly in the spinal cord. It is evident that viscero-somatic reflexes would be impossible if viscero-sensory nerves did not enter the cord, or if they did not form either direct or indirect physiological relations with the somato-motor neurons. On the other hand, somato-visceral reflexes would be impossible were not the somato-sensory axons related with the viscero-motor neurons. In all the somato-visceral reflexes the latent period was longer. The somato-visceral reflexes affecting the heart were most satisfactorily studied upon human beings. The results obtained with animals were in harmony with these.***
>
> ***Inferences and Conclusions***
>
> ***A very important, if not the only, pathway of viscero-sensory impulses enters the spinal cord through its posterior roots. Somato-visceral reflexes are much less circumscribed and direct than are viscero-somatic reflexes. Since abnormal conditions of the viscera follow such pressure upon somatosensory nerves as is sufficient to lessen conscious sensation, and since section of somato-sensory nerve is followed by abnormal conditions of the viscera, it is inferred that nofmal visceral activity depends in part upon the stimulation derived from the somato-sensory nerves. The possibility of recognition of abnormal viscero-somatic reflexes as an aid in diagnosis is inferred.”*** *- Dr Louisa Burns, DO, “Viscero-somatic and somato-visceral spinal reflexes”, Journal of the American Osteopath Association, 1 October 1907.*

She had been studying the mechanisms of reflex arcs in animal models to understand better the complex interactions between the viscera, spinal cord, and soft tissues.” - in “Physiology, Viscerosomatic Reflexes”, StatPearls, 1 May 2023.

> ***“Deep Reflexes Everywhere Exaggerated. Coma Preceded Death.”*** *- Dr Julius Mickle, MD, in “On Syphilis of the Nervous System”, Brain, 1895.*

> ***“A helpful part of this book is the exposition of the important influence of the pre-existing State of Tonus in the Vegetative Nervous System on the results obtained by subsequently stimulating it. Neglect of this principle explains much of the confusion and contradiction to be found in the literature.”*** *- Dr Wulf Sachs, MD, in “The Vegetative Nervous System”, 1936.*

Further study material on Reflexes:

“Symptoms of Visceral Disease”, Dr Francis Marion Pottenger, MD, 6 Ed., 1944.
“The Vegetative Nervous System”, Dr Wulf Sachs, MD, 1936.

Chapter 12

On the Causation of Disease

"When, the food has been properly digested, and elaborated in the stomach, and has passed into the intestines, it solicits admission into the system through those innumerable little vessels called Lacteals, which are distributed over the whole, surface of the smaller intestines, and absorb the fluid portion of the food, which is now called chyle, while they reject the coarser particles.

It is with the chyle only we have to deal, for that only enters into the system.

Well, then, this nutritive mater having been subjected to several previous tests, the eye having scanned it before it entered the mouth, the nose having pronounced it savoury, and the palate having approved of it; and further, it having been purged of its grosser particles at the time it wins absorbed by the lacteals, it is all poured into a single largo tube, called the thoracic duct, which conveys it into one of the big veins (subclavian) in the upper part of the chest close to the backbone.

And now being in the full stream of the systemic circulation it can be carried to every part of the body wherever it is wanted to supply the continual waste — the constant wear and tear which is always going on in every portion of the corporeal system.

But now the question arises, has this chyle, this elaborated alimentary matter, been perfectly purified!

Was every deleterious substance eliminated at the several ordeals through which it had to pass! Certainly not.

Unless the Lacteals had admitted other substances than those which were strictly alimentary, there would have been but little scope for the medical practitioner.

It is by the admission of what may be termed foreign substances into tint food, that the physician is enabled to produce any of the beneficial effects which he contemplates.

But **then that name unreasoning facility on the part of the lacteals of admitting the drugs which the physician prescribes, admits also a great many other things which he doesn't prescribe.**

Some of this deleterious matters, from the use of bad food, or impure drink, may get into the blood, whether we will or no; and there me many others, not positively deleterious in moderate quantities, although not alimentary, which we voluntarily imbibe; and these in their cumulative effect may become poisonous, and the fruitful causes of disease.

I will go on with the Emunctories in their more ordinary operation.

I say ordinary operation, for **even supposing that no foreign substances had been absorbed by the lacteals, but only simple nutritive matter, yet the blood would need cleansing — would need the aid of Emunctories.**

For there is reason to conclude that in the reparation of the constant waste of the body, by every muscular movement, may by every effort of our volition and our thought, and by all the wear of its internal machinery, which is perpetually going; on of itself, some corpuscles of the blood are destroyed and let floating there dead; and if dead then requiring also to be decently buried.

When I employ the word dead of these corpuscle, I am not using figurative speech, for these corpuscles of the blood have a real life of their own; it may be an unconscious life, but is a real life, and they are endowed with instincts to do certain work in a certain fashion, just in the same way that insects; like bees and ants, instinctively do certain work and only in a certain way.

These living corpuscles are fed by the aliments we imbibe, and when their life is over, for every minute they die by thousands, their dead bodies must be conveyed away.

This, then, is a constant cause of deterioration in the purity of the blood, irrespective of any poisonous substances which may have been imbibed by the lacteals.

Judging then, by the many other examples, of ingenuity so obviously displayed in the structured the animal fabric, we might feel quite sure, that there would be means provided for the removal of noxious substances from the blood and for keeping it pure. And so there are.

There are every where throughout the whole of the animal system means and appliances constantly at work pumping away all deleterious matter from out of the great circulation.

These then are the real Emungents of the system, and it will be necessary to speak of them more in detail.

At an earlier stage of anatomies investigation it was customary to call the liver and the kidneys the 2 great Emunctories of the animal system; the former currying off the waste matter which had no ammonia in it, example: nitrogen, the latter carrying off the waste ammoniacal product.

But the term Emunctory, as applied to these two great organs.

Has now been generally given up; because in point of fact, the Emunction or Cleansing of the system is by no means limited to these organs only, but is going on all over the system, and is performed by exceedingly minute organisms distributed everywhere.

I have already said that in the blood there are floating innumerable living corpuscles. The word corpuscle, means a little body; and very properly are they called bodies, because **when speaking of the glands, each has a life and instinct of its own.** They are all living bodies and all incessantly doing work.

Bees and Ants, are only at work by day; but these creatures, are at work by night as well as by day. Whether fixed to one locality as the glandular cellules are fixed, or whether free to move as the corpuscles of the blood are free to move, they are ever actively at work; the fixed ones, viz. those in the glands, resembling more the polyps and the sponges in the realm of nature, the corpuscles of the blood resembling more the bees which fly through the air.

But although alive, they, are subject to death; indeed they surrender their lives in the very discharge of the duty for which they were born.

Their dead bodies if left in the blood would soon pollute it, and highly necessary is it that provision should be made for carrying them away.

The vessels employed in this duty go by the name of the lymphatics, so named because the fluid they contain is not coloured red, as is the fluid which circulates in the arteries and the veins, but is a colourless lymph.

Although therefore they ramify throughout the whole system, they are not so obvious as are the arteries and the veins.

Should you, however, by any accident poison, by some venomous matter getting into a wound, you would very soon be able to trace the whole course of these lymphatics up the arm by their inflamed redness, the redness lining occasioned by the blood coming to their relief.

The direction of these Lymphatics is mainly to the liver, for there they deliver their cargo; the liver being as important, a goal for the lymphatic system as the heart is for the venous.

The liver on receiving these raw materials converts them into bile; and this bile passing through certain ducts is poured into the receptacle of the digested food immediately on its leaving the stomach.

It may excite a momentary surprise in us, that, this bile, which apparently is faecal matter drawn out of the system, should he mixed with the food just as it comes fresh from the digestive organs — defiling it apparently at the very time when it is prepared to he absorbed into the blood.

Nothing is more certain than that the most important prerequisite for health is that all our vessels should he kept clean, or, at all events, free from decaying animal matter. These numerous Emunctories, distributed throughout the interior of our system, are provided for the express purpose of preserving it pure — pure in those intimate parts of our structure which are beyond our own reach.

It is very necessary, therefore, that these Emunctories should be maintained in a condition of normal efficiency.

A morbid condition of the body will generally depend upon the blood being overcharged with matter which ought to be purged away, and the Emunctories must be stimulated to do it.

But sometimes, also, it will happen that the Emunctories, in their own voluntary efforts to drain off foreign matter from the blood, will be excited to too great violence. It is unwise to neglect premonitory symptoms of disorder; but it is still more unwise, nay, even dangerous, ignorantly to prescribe for oneself — tampering with **poisons, which might possibly produce most mischievous effects on the delicate organisms of the body. It is quite true that a man may really become his own best physician.** It was a saying of the Roman Emperor Tiberius that a man must be a physician or a fool by the time he is 30; not, however, by prescribing drugs for himself, **but by so adjusting his habits of food, and sleep, and cleanliness, and bodily exercise as to require no drugs.**

To do this, it requires not only a careful observation of what habits are most conducive to health, but also a firm and courageous exercise of self-control, so as to adhere rigidly to the dictates of experience and observation.

What makes a large degree of cautious observation necessary in the matter of food, is that at our ordinary meals we ingurgitate not aliment only for our sustenance, but many other things for our delectation.

The great majority of diseases owe their origin not to deficiency of nutriment, but to its overplus.

The blood in consequence becomes overloaded with alimentary matter, and the Emunctories, although working night and day, cannot carry it all off.

The corpuscles of the blood are multiplied to an inordinate extent, and the more delicate blood vessels are almost ready to burst with the plethora of the fluid within them.

Gout is not so much a disease, as a beneficent provision to relieve the system, from excess of nutriment is proved by an analysis of the chalk-stones, which are deposited at the points of the gouty man's toes.

They are found to consist of the ingredients which enter into the constitution of his animal food. As for rheumatism, it is only another form of gout.

Unless, the amount be correspondingly reduced, or the superfluity worked off by strong bodily exercise, morbid action of some sort will supervene, simply because the energies of the Emunctory organs are overtaxed.

The diseased action which will ensue will not be the same in every individual, but will vary according to his idiosyncrasy.

If these superfluities should be conjoined with more poisonous ingredients, obtained from (wrong choice of food & drinks, and or), the habitual use of certain specific medicines, then a simple boil may be angered into a carbuncle, or **cumulative poison may even corrode the tissues and the bones.**

Neuralgic pains seem due to the presence of some of these innocent poisons in excess. An overcharged venous system is ever liable to congestion, and should congestion result in the internal rupture of any blood vessel, there is always considerable peril.

True, the lymphatics immediately set to work to convey away the extravasated blood (as we see a black eye regain its colour in a few days), but if this result is not speedily achieved, one of 2 effects follows:

1. If the extravasated corpuscles meet with a thin living membrane, they retain their vitality and begin to build up solid animal tissues in the wrong place, tubercles it may be or hard tumours; but if on the other hand the blood corpuscles should die, they begin to decay, and nothing is more corrosive to neighbouring tissues than decaying blood.

As bleeding gums, unless carefully rinsed, destroy the teeth, so do internal haemorrhages destroy any structures, whether bones or tissues, which lie long in their proximity." - in "The Emunctories", Australian Health Society, April 1883.

The Death From Pneumonia Is Caused by Auto-Intoxication

"As Bouchard says, the causes of diseases may be many, but the processes following those which produce disease can be relegated to 4 types.

These 4 Chief Pathogenic Processes are:

1. **Primary Elementary Dystrophies;**
2. **Nerve Reactions;**
3. **Disturbances Antecedent to Nutrition;**
4. **Infection.**

In attempting to place before you in a concise manner these thoughts upon **Auto-Intoxication**, I will have occasion to refer to the process of **disturbances antecedent to nutrition, this is the most important factor in the development of Chronic Diseases, and one that should not be overlooked when attempting to prevent the development of acute disease.**

To understand the antecedent disturbances, we must first be acquainted with the process which takes place in all healthy tissue, and which we term metabolism.

For the purpose of illustration we may take the instance of a muscle of definite structure; it enjoys a free supply of blood and displays, during contraction, energy, heat and sound. It produces certain chemical substances, carbonic acid, water, etc.

The blood becomes venous, i.e., loses oxygen and certain elements that supply nutrition to the tissue.

The character of the changes that take place in the muscle will depend largely upon the material supplied to the tissues of that muscle.

Thus the protoplasm acts on and alters the lymph, and the lymph acts on and alters the protoplasm, this constituting the vital process, the life of tissues, so that it is apparent that the healthy activity of the tissue will depend upon the kind of material supplied. In considering the metabolic changes in the tissues, we must always remember that if the waste material be carried from the tissues by the blood, these products of cell activity must be eliminated by the Emunctories, that the blood may be relieved of its load of waste in order that it may carry again to the tissues the material prepared for their nutrition and the oxygen that must be incorporated in order to have healthy cell activity.

Now, we can see how much we must depend upon the Emunctories to relieve the system of the poison produced in the metabolism of tissues, and in order that their functions are properly performed, it is necessary that the blood, circulatory apparatus and nervous system be in good condition.

So here we are again liable to have a double reaction, the Emunctories failing to act properly if either the blood, nervous system, or circulatory apparatus become disordered, or the Emunctories fail to functionate properly.

That the primary cause of disturbances in metabolism may be looked for from 2 sources, i.e., the product supplied by the blood for pabulum, and the oxygen, admits of no dispute.

If the plasma takes to the tissues a supply that is over-rich in various constituents, that contains poisons that have not been eliminated by the Emunctories, or that is deficient in nutritive principles, or if the supply of oxygen is insufficient from any cause, the tissues will not be capable of performing their metabolic changes in a proper manner.

We will look for cause of interference with metabolism which originate in the intestinal tract.

For instance, we have a patient, as all have had, who presents himself for treatment and complains of feeling much depressed in the morning upon awakening, slight headache, probably has slept poorly, is dizzy upon attempting to rise from bed, possibly almost falls while washing his face, is very sensitive to slight changes in the temperature, in other words, takes cold easily, disturbances of vision, and possibly contraction of hands, as pointed out by Kussmaul, Beaumetz, and others.

In this case we examine the stomach carefully and find that there is dilatation; there is also eructation produced that may become fetid, still, owing to the inactivity of the muscular coat of the stomach, eructations are not always present. Regurgitation with acid odours may take place.

This is positive evidence that there is fermentation in the stomach.

The faeces are generally acid, and peculiarly offensive; and upon careful inquiry we may find that although the operations are soluble there is a feeling that the act is incompletely performed, and there is likely to be burning about the anus.

In such a case we will find congestion of the liver, because the organ has attempted to prevent the poisons generated in the intestinal canal from getting into the general circulation.

The metabolism in the liver becomes weakened, and eventually the organ becomes indolent, and allows the poison to enter the general circulation and we have, as a result, Auto-Intoxication.

Again, we have the nervous system exposed to a shock; there is a disturbance in the circulation; the cutaneous vessels are contracted, and there is an increased amount of blood in the central organs; the great regulating apparatus, the kidney, does not respond; the equilibrium is not re-established and, as a result, we have possibly a catarrhal condition of the common bile duct which interferes with the outflow of bile.

There is also suppression of the part taken by the liver in dis-assimilation, and waste products that should be eliminated are reabsorbed and the result is Auto-Intoxication which would be of much more frequent occurrence if it were not for the permeability of the kidneys. In this we have a constant menace to the entire economy, for the irritating products which escape by the kidney, are likely to irritate that organ to such an extent that it may fail to eliminate the poisons that have been absorbed from the liver.

Therefore it is the duty of every physician to watch and investigate these important Emunctories, and every care should be taken to relieve them of the injurious effects of the elimination of these poisons by diluting them as much as possible.

In diseases of the air passages, Auto-Intoxication is so palpable to everyone that we need hardly dwell upon the subject.

The accumulation of carbonic acid and other waste products in the system, which should be eliminated by the lungs, is one reason why these diseases are often so difficult to manage, and why Pneumonia, for instance, is such a fatal disease, the gravity of disease increasing in proportion to the amount of eliminating lung tissue involved; **in other words, the death of the patient from Pneumonia is caused by Auto-Intoxication.**

In concluding, **I repeat, that in those cases of serious impairment of the metabolic changes in the tissues; where oxidation is incomplete; where the nervous system is unstable; the circulatory apparatus is defective; the kidneys, lungs, skin, bowels or the liver are being overworked, either from the products of dis-assimilation or mal-assimilation, and in spite of those cases where one or more of the Emunctories are defective in themselves, consider the possibility and the probability of Auto-Intoxication.**

These causes the primary disturbances antedating the nutrition of every form of tissue in the body originates, that in these disturbances we often find the commencement of not only such diseases as Bright's disease of the Kidney, Diabetes, acute Yellow Atrophy of the Liver, but that Carcinoma, Sarcoma, etc., may have their origin from the same cause.

It is the duty of the physician of today to guard against the Accumulation in the System of such products as Poison the Tissue, such as cause Auto-Intoxication, and in this way disturb the General Nutrition." - Dr J. R. Lemon, MD, in "Auto-Intoxication", The Medical and Surgical Reporter, 2 March 1895.

> ***"The Physical Roots of Disease are: Toxic Accumulation, and Vitamin and Mineral Deficiency."*** *- Dr Ulric Williams, MD, in "Hospitals and Hooey or Health?", 1941.*

> ***"It became impossible to find a decisive factor in the vast literature of the production of these malignancies, as physicians looked and are still looking for one specific factor only.*** *The solution is that* ***it is not a single factor but generally one of many factors or an accumulation of one poisoning for a long period of time,*** *as the experiments of Itchikawa and Yamagiva show.* ***They needed about 9 months first to damage the liver, kidneys, etc.*** *— another proof of reactions in their totality. That a very strong poison can damage the liver in a few days and produce a hepatoma in 10 days does not speak against it. This cannot be compared with* ***the slowly progressive deterioration in our system caused by modern civilization.*** *From work in our clinic,* ***we know that many diseases do not appear independent of each other.***

> ***Sinus inflammation is frequently combined with chronic bronchitis or bronchiectasis, also with laryngitis, nephritis, and other distant infections. Chronic cystitis is frequently united with appendicitis. Surely, cystitis is associated with a combination of disturbances in the digestive organs. Gall-bladder diseases, mostly combined with liver alterations, appear together with myocardial changes and later cause cirrhosis of the liver. Consequently, where the defence of the body is essentially reduced, there frequently are bacterial infections of one or several organs.***
>
> *These clinical findings bring us to the conclusion that* ***several different types of pathological changes may occur as the consequence of a deep general cause in the body*** *which* ***we can subordinate under one leading idea, the law of totality or the loss or diminished degree of "healing power".***
>
> ***Thus, the development of disease, its course and healing process, do not depend so much on the type of tissue or organ involved, but more on the general healing power of the entire organism, united or centralized in all its metabolic processes for the most part concentrated in the liver. Contrary to this concept, our textbooks and journals have separated different diseases. There are, of course, differences in the type, development, complications, prognosis, etc., but the basic idea must be maintained that the defense and healing power is an essential part of the whole body and must be restored, whatever organ or organs may be involved or whatever cause the malignancy may have had. I repeat: In general, the recovery from a malignancy means the restoration of the whole body from a kind of degeneration.*** *" - Dr Max Gerson, MD, in "A Cancer Therapy", 1958.*

Auto-Intoxication And Disintoxication

"At the Annual Meeting of the British Medical Association, held in London in July 1910, a paper was read by Dr Guelpa, of Paris, on "Starvation and Purgation in the Relief of Disease", British Medical Journal, 8 October 1910.

Dr Guelpa gave an outline of **a New Treatment**, Combining periods of Abstinence, **with Purgation, which had given him remarkable results in Diabetes and Other Chronic Diseases, and cited 2 cases, 1 of Diabetes with commencing Gangrene, and the other of severe and old-standing Gouty Arthritis, in which the "Disintoxication" Treatment was applied with a success one certainly could not look for with any confidence from any methods of treatment in ordinary use.**

The Importance of Auto-Intoxication As A Factor In The Evolution of Many States of Chronic Disease is becoming more and more widely recognized. It must be borne in mind that the excess of proteid is taken mainly in the form of flesh food (Meat), a form of food rich in purins, and prone to **undergo decomposition in the alimentary canal, with formation of toxic substances probably somewhat of the nature of ptomaines.**

It would appear improbable, on the face of things, that quantities of flesh food largely in excess of the needs of the individual can be consumed day by day without leading in very many cases to evil results; **to a condition of self-poisoning, in fact, or Auto-Intoxication.**

Though the reality of **the Condition known as Autointoxication, and the Importance of the Role It Plays in the Evolution of Diseased States, are very widely recognized nowadays in the medical profession.**

Dr Guelpa, makes the deduction which logically follows from it, and, finding an individual suffering from illness which he considers to be **an expression of a condition of Self-Poisoning, says:**

> ***"The primary object of treatment in this case should be to relieve the patient of the poisonous matters or toxins which are making him ill, and to do this as rapidly as possible."***

This process of removal of toxins Dr Guelpa terms "Disintoxication", and his method of carrying it out is to prescribe complete abstinence from food for a few days, and **a copious daily purge, his object being:**

1. To induce the organism, by the withholding of food, to "burn up", so to speak, its waste, effete and toxic matters.

2. To remove the products of this combustion freely and regularly.

If, a bland saline purgative such as sulphate of soda (Hunyadi Janos water or simply 4 dilute solution of the salt) be used, the treatment can be carried out for a period of 3 days without any hardship or suffering.

Dr Guelpa statements in this regard I have verified repeatedly.

It is in the treatment of Diabetes, a disease which he regards as pre-eminently an expression of Auto-intoxication, that Dr Guelpa has made most extensive employment of his method. The results obtained are very remarkable, and are such as cannot be obtained with any approach to certainty by any other method.

Diabetic Gangrene is generally regarded as an almost certainly fatal complication, and one whose progress it is impossible to arrest by treatment.

In a large percentage of cases the first 3 days abstinence-purgation treatment removes sugar completely from the urine.

All this, it seemed to me, proved, so to speak, mathematically, **that disease is a state determined and kept up by the presence within the body of a quantity of products of fermentation; toxines and the débris of poisoned tissues, which the organism must eliminate before it can return to a condition of health.**

The more rapidly this elimination is effected, the more prompt and perfect is the re-establishment of health, often, indeed, at a level considerably above that obtaining before the illness. These ideas I have applied consistently and without intermission throughout an extended period of busy medical practice, and I have no hesitation in saying that I have invariably seen them confirmed by the event.

So much is this the case that a feeling of weakness on the part of my patients gives me no longer any anxiety; **this false sensation of weakness being, in reality, nothing but an expression of a condition of encumberment with toxic products and cellular débris, of which it is important to relieve the organism as soon as possible. The proof of this lies in the fact that in these cases, if an efficient purge be given, the patient feels, other things held constant, less weak on the following day.”** - Dr G. Guelpa, MD, in “Auto-Intoxication and Disintoxication”, 1910.

What Is Disease?

“Disease is Any Deviation from the Normal Condition i.e., from health.

Health is best and most concisely defined as the condition in which all the vital organs perform their functions rhythmically. A disorder in one organ, upsets the others. Health implies that all organs, are working in harmony.

Disease is either:

1. **Functional**
2. **Organic**

Functional Disease, is one in which the physiological action is disturbed, but does not show pathological lesions or morbid anatomy.

Disease is Organic when it gives indication of morbid anatomy.

A disease may be both functional and organic; but it may be purely functional without showing any change of structure, the physiological action alone being disturbed. Hence a good knowledge of Physiology and Anatomy is necessary in order to understand disease.

The Blood

Arterial blood is scarlet; venous blood is blue; dead blood is black. Under the microscope blood is nearly colourless. It is made up of water and salts and the red and white blood corpuscles. It also contains fibrin forming elements; fibrin itself does not appear in the circulating blood. **The function of the blood is to carry nutrition. If the circulation is disturbed a disturbance of the nutrition will occur.**

Some parts of the body suffer more from interrupted nutrition than others.

A constitutional disturbance carried to the extreme always produces inflammation.

Diseases of the Digestive System

The presence of the food stimulates the gastric juice to flow.

As soon as the acidulation comes up to a certain point, the pylorus opens and the products of digestion (chyme) pass out into the duodenum, where the bile and pancreatic ferments act upon it.

The Action of the Bile is 3 Fold:

1. **Changes the Acid reaction to Alkaline.**
2. **Emulsifies the Fat.**
3. **Acts as a Laxative.**

The Pancreatic Juice contains 4 Ferments:

1. Amylopsin to digest starch.
2. Steapsin to digest fat.
3. Rennin to digest milk.
4. Trypsin to digest proteids.

In the duodenum the chyme is changed to chyle.

In the intestine the food meets with succus intericus, which Pawlow calls the "juice of juices."

The food is absorbed by the villi of the small intestine.

In the villi are the small lymphatics which take in the chyle, carrying it to the receptaculum chyli and from there on through the thoracic duct to the heart; the villus capillaries absorb the other products of digestion and carry them to the liver.

The Stomach is the Fountain of Health; if in good condition the animal is well.

In man Indigestion is the Main Factor Causing Disease, and this is also true in the other animals.

The food is either too bulky, or too concentrated; too rich or too poor; too wet or too dry; contains too much indigestible matter or not enough of it; the animal is either over-fed or not fed enough.

As regards the tendency of digestive organs to develop disease: this depends largely upon the parts of the digestive system most often in use; such parts will be most abused.

In the horse the food is a short time in the stomach, and a long time in the bowels.

Consequently the horse has less disturbance in the stomach than in the bowels; diseases of the bowels are common.

In ruminants the reverse conditions attain; diseases of the stomach are common, and rare in the bowels.**Many diseases come from Bolting the Food.**

It is a recognized fact that wholly digestible food produces paralysis of the stomach. For this reason it is not a good plan to feed a horse on flour: the stomach requires the cellulose covering of the grain."- in "Theory and Practice of Veterinary Medicine: Notes Taken from Lectures", 1911.

What Causes Fever

"Puerperal Fever;

"On the 8 May 1701, the wife of an officer in a royal residence, living about 4 leagues off, having been delivered 3 days before, sent for me by the diligence.

I found her with fever, the abdomen hard, tense, and so painful that she could not bear any thing over it, not even her chemise.

The lochia had ceased for 2 days, and instead of them there exuded a serous matter, reddish, and inclining to black, of insupportable odour, with very violent darting pains, which occasioned my calling the mid-wife, who assured me that the after-birth was quite entire.

But as circumstances seemed to indicate the contrary, I placed the patient in a position as if to deliver her, after which I introduced without difficulty my finger into the interior orifice of the uterus, where I found a small membranous substance.

I put another finger, and between them drew away this small substance.

I then brought away several clots of blood.

These were all most offensive, and several other similar ones came away during part of the night; but the lochia resumed their ordinary course, and in the morning I left the patient free from all the accidents with which on arriving I had found her seized, because by removing the cause, the effect was destroyed, and she became quite well.

Hence, then, whether the blood be vitiated by primary introduction of certain extraneous substances, or by the secondary effects of previous inflammation of the vein, a series of morbid actions will arise, which reproduce all the injuries of puerperal fever.

The views I have advanced as to the real nature of this malady, may be farther supported by an analysis of 3 other series of facts, in all of which, there is a great resemblance to each other, and to the effects seen in puerperal fever.

I mean:

1. The effects of wounds from dissections;
2. The viper bite;
3. The effects of some acknowledged diseases of the fluid, &c.

In all these, with very considerable differences, referable to differing causes, we have striking similarities; and in all, the solids are only secondarily affected.

But I trust, that what I have advanced, will be sufficiently pertinent to my conclusions, to permit me merely to indicate these sources of additional support.

If the reader will compare these with the lesions of puerperal fever, and with those produced by injuries and wounds, after surgical operations, with those produced by injections into the blood-vessels, he will find, that they all agree in disposing the body to effuse its fluids; to set up inflammations, of the most varying kind, in most distant and least connected parts of the body: that the anatomical characters of the lesions of puerperal fever, those following injections into the vessels, and those occasioned by injuries of veins, arising after surgical operations, and those from punctures in dissecting, are extremely alike, and that the variations are dependent, much more on the point at which the circulation has begun to be injured, than on any essential distinction in the nature of the maladies produced.

In puerperal fever the injury is, almost invariably, in the uterus or its appendages; hence the frequent circumscribed peritonitis, metro-peritonitis, and ovarian disorganization.

In punctures, from dissection, the chest is first affected; in injuries of the head, the head and the liver, with which it is so intimately connected.

In 8 out of 10 cases of phlebitis, following bleeding, the head and chest were the seats of inflammation, and in none was the abdomen affected.

In all, there is purulent or fluid deposit, in muscles, cellular membrane, the joints, eye, and in the centre of organs generally.

There is great accordance, even in their exceptions from this law; for, in all, it occasionally happens, that **the commencing point of injury is not the most injured, but that it is passed over while the poison falls on some other part.**

There are some peculiarities deserving attention, in the effects of injections of the arteries. In both Gaspard's and Cruvelhier's experiments, the operation was almost always intensely painful, unlike the effect of venous injections, which were painless.

It was found that gross substances, such as mercury, oil, extract of opium, did not readily permeate the arterial capillaries; and thus producing a mechanical impediment to the circulation, gave rise to rapid gangrene, or serous infiltration, or inflammation.

Cruvelhier's experiments tend to show that substances injected into the arteries will produce varying effects, according to the greater or less facility with which they pass from the arterial into the venous circulation.

If they are arrested in the former, there is gangrene; if they pass into the latter, we have all the complications of the so-called phlebitis, abscesses in muscles, in the eye, the joints, the liver, softening of the various tissues, inflammations of distant organs, and depositions of pus, blood, lymph, or serum.

Both experimenters agree in stating, that in the living body, the transmission from arterial capillary to venous, is extremely difficult.

The quantity of injection, whether in vein or artery, and the vigour of the animal, modified the result, says Cruvelhier, in the most singular way; a small quantity being eliminated by intestinal or urinary secretions, while a larger dose killed.

The quality of the substance also influenced the result.

Alcohol produced less pain than ink (Cruvelhier).

In 6 experiments, in which ink and water, or alcohol, was injected into the femoral vein only, **the ink always caused more pain than the alcohol.**

Many substances were innocuous, while others were extremely deleterious.

In whatever point of the venous system, except in the system of the vena portæ, **foreign substances are introduced, they will ultimately be found in the lung, and there cause inflammation and tubercle.**

It is by these 2 systems of the vena portæ, and of the pulmonary capillaries, that all substances transported in the circulating vessels are at last arrested or eliminated.

And the late experiments of Tiedemann and those of Magendie prove, the one for the liver and the other for the lung, that these 2 organs are the great Emunctories of the frame; and it is owing, perhaps, to this, that they, of all the organs of the body, are the seats of the greatest number of maladies.

The Causes Vitiating the Blood are Particularly Rife in the Puerperal State

We have seen, that all the accidents of P**uerperal Fevers may be produced artificially by vitiating the blood; and that the blood may be vitiated in at least 2 ways: by direct insertion of noxious matter into the blood-vessels, as in inoculation, injections, poisonous bites; or it may be vitiated by injuring the solid vessels mechanically, thus creating inflammation, which Inflammation Furnishes the Matter that is Conveyed into the Torrent of Circulation to Infect the Blood.**

We have also seen, **that putrid animal substances are among the most noxious poisons to the blood; that besides these, there are many animal fluids, which, though not putrid, still are extremely injurious — as pus, lymph, and especially the recent exudations caused by inflammation of the serous membranes.**

We may ask, therefore, whether these 2 conditions of danger are present in the puerperal state:

1. Are the vessels mechanically injured?
2. Are they in contact with any noxious matter?

It will at once, be acknowledged, that the uterus after child-birth combines both these conditions." - Dr Robert Ferguson Murray, MD in "Essays on the Most Important Diseases of Women", 1839.

> ***"Disease is Nature's Method of completing what seems a very superfluous chain of actions, and man's duty is to second her efforts by stimulating the Emunctories."*** *- in "Gaillard's Medical Journal and the American Medical Weekly", 1883.*

The Influence of Vitality Upon Secretion

"As far as I can ascertain the general notion about secretion, it is, that it is essentially an active process; and that increased secretion, as a necessary consequence, implies the idea of increased action in the secreting organ.

Thus we speak of Perspiration as Increased Action of the Skin; Diarrhoea as Increased Action of the Bowels; Diuresis of the Kidney; and the like.

Still farther, we consider that various organs can be stimulated or goaded into increased action, and we find such ideas constantly put into formulas in the following manner: Diaphoretics, Diuretics, Aperients, etc., are Given to Increase the Action of the Skin, the Kidneys, the Bowels, and the like.

Under other circumstances, we have the idea of increased action put in another form; thus, **in Rheumatic Fever we are told that Perspiration is an "effort of nature" to throw off or eliminate a certain poison; in the Diarrhoea accompanying many cases of Bright's disease, we are told that the bowels take on "increaser action" to relieve the kidneys; that in Scarlatina, the kidneys take on increased action so as to supplement the deficient action of the skin, etc.**

In all these instances, and many others we might name, there is a steady idea apparent, that increased secretion implies increased action, and that increased action implies increased power.

This idea receives corroboration from the constancy with which increased secretion from the nostrils, bronchi, urethra, and vagina, are spoken of as produced by "inflammation" of the Schneiderian membrane, of the mucous membrane of the bronchi, etc.

Thee first fact to which I would call attention is, that during the short period of life which elapses between an apoplectic stroke and its fatal termination, we have, in a vast majority of instances, if not universally, an abundant perspiration upon the skin, and a copious secretion (I use the word for want of a better) of mucus in the trachea and the larger bronchi.

Cold clammy perspiration, and the "death rattle" in the throat, have long been recognised in many diseases as immediate harbingers of death." - Dr T. Inman, MD in "On the Influence of Vitality Upon Secretion", The British Medical Journal, 30 April 1859.

"As to "Nerve-Power."

What do we really know of its influence on secretion?

We know that under **certain mental emotions, certain secretions are increased or diminished;** that the effects of dividing nerves, going to certain organs, is uncertain, and there our real knowledge ceases. Per contra, **we see secretion going on in plants, where there is no nervous system.** The same may be said of the "actinia", in which no such system can be demonstrated; and the same of transparent larvæ, whose every nerve we can trace. We can see in the transparent part of the kidney of the triton, that the renal tubes and Malpighian bodies and capsules are unaccompanied by nerves and yet secretion goes on.

We cannot demonstrate the presence of nerves in the membrane lining the Haversian canal, or in the lacunæ of bone or cartilage.

No nerve can be demonstrated in the membrane covering articular cartilage, nor does the anatomist pretend that there is a nerve for every small lobule of the liver, or for every individual air-cell in the lung.

The peritoneum, pleura, and pericardium, are not universally covered with nerves, and I do not think that any microscopist has discovered an abundant supply for the arachnoid, yet all these parts secrete their own peculiar fluid.

If, then , secretion will go on without nerve-power being demonstrably present, we must not appeal to that force to get us out of our difficulties; this is, simply to explain something, of which we know little, by referring it to something of which we know less, a very common error nevertheless.

As a matter of fact, I believe that **all living matter comes under the laws of inorganic force**, in direct proportion to the diminution of organic power.

In that we agree.

My wish is to show that there is a condition of the body intermediate between perfect health and absolute death, which has not yet been sufficiently studied.

The living body has certain powers and tendencies, which we speak of as organic or vital.

The dead body has certain others, which we know as physical and inorganic.

Of the mutual reaction of these opposing forces, when the former is weakened, we really know little.

Circumstances have induced me lately to investigate them as closely as I can.

The results attained are of extreme interest.

I will not enter into them, however; but sum up the question before us in the words of one of the most original thinkers of the day, Mr Lewes. "What is the organic process on which this excess of secretion (in debility) depends? Vitality is only a general phrase.

I cannot help thinking that the old idea is correct which says that increased secretion results from an increased activity of the secreting organ, increased special power, though caused, perhaps, by an organic disturbance which is coincident with diminished general power. The latter point being brought to light, the attention should be directed to the modus operandi."

I doubt myself whether we can consider that "increased special power" can be present in an organ secreting over abundantly, when such secretion is diminished by local stimulants as much as by general ones." - Dr T. Inman, MD in "Influence of Vitality Upon Secretion Reply to Mr Spender", The British Medical Journal, 2 July 1859.

The Body in the State of Pneumonia and its Relation to Other Diseases

"Acute Rheumatism, which we have watched with considerable interest, on account of their presenting the serious complication of Pneumonia of a low type affecting both lungs. **From whatever circumstances it arises, it is an unquestionable fact, that the low forms of pneumonia are far more common in towns. Asthenic Pneumonia, or Typhoid Pneumonia, as it is often called, is a disease of by no means infrequent occurrence, often presenting itself as a complication of some pre-existing disease, sometimes existing as a simple primary affection**; under either condition, it possesses some peculiar features which merit your especial attention. The descriptions of disease which are given in systematic treatises and lectures are generally derived from certain typical forms, and it is necessary that this should be so; but in applying the knowledge you have thus gained to clinical observation, you will be perpetually reminded that the proportion of cases which realise, in all respects, the descriptions you have read, is very small indeed; and you must be prepared to encounter many and wide deviations from the model form which has been placed before you.

Such is eminently the case with inflammation of the lungs.

Perhaps no malady is attended with less uncertainty in its diagnosis than a genuine case of simple sthenic pneumonia: on the contrary, there are few more insidious than the same disease in its asthenic form.

Where asthenic pneumonia exists as a secondary affection, it is not infrequently so entirely destitute of special symptoms that its presence may be entirely overlooked ; and were it not for our knowledge of the circumstances under which its occurrence may be expected, our attention might never be directed to the chest.

In each of the cases at present under our consideration, there was no reason whatever to suspect the existence of the disease prior to the physical examination of the lungs. In feeble or unhealthy subjects, again, pneumonia, although it be the sole or primary affection, is often deprived of some of its most characteristic signs.

When pneumonia occurs as a secondary affection, it is spoken of as intercurrent. **It is a more or less frequent complication of many diseases, which are produced by the presence of a poison in the blood; thus it is met with in the course of typhus fever, in erysipelas and surgical fever, in scarlatina, measles, and influenza, in remittent and yellow fever, and, as we have also found, in acute rheumatism.**

It appears not improbable that it may sometimes exist **as the direct consequence of a morbid poison where no other indications are afforded of the presence of that Poison in the Blood, just as in every epidemic of scarlet fever we find isolated cases in which the characteristic affection of the throat is the only symptom of the disease which is present.**

Thus, whilst erysipelas is prevailing in the wards of a hospital, and the subjects of wounds or of operations are liable to be seized with that malady, instances every now and then occur of patients similarly circumstanced

suffering from asthenic pneumonia, which we have every reason to refer to the poison of erysipelas, although the usual cutaneous inflammation be absent.

But the disease is also met with where we have no reason to suspect the existence of any specific poison in the blood; it may occur after exposure to cold, or to the operation of any ordinary cause of simple inflammation, in enfeebled individuals who have been exhausted by overwork, by anxiety, or by other depressing agencies, or who have lowered their health by intemperance, or by unhealthy habits of life. Such appear to be instances of ordinary inflammation, occurring in a debilitated constitution, which imparts to them their asthenic type.

Yet, in many of these cases the early development of delirium, or of diarrhoea, or, as I have seen more than once, of jaundice, together with a manifest and alarming tendency to sinking, affords reason for the suspicion that some poison has either pre-existed in the blood, or has been produced by the exciting cause of the disease; and this suspicion is strengthened by the observation, that in such cases the urgency of the symptoms bears no proportion to the extent of the inflammation; thus, I have seen these serious symptoms present, and hasten rapidly to a fatal termination, where the inflammation has been limited to one lung, and absent when it involved the entire lower lobe of both lungs. Where pneumonia is present under any of the circumstances I have indicated, the signs of its existence may be obscure; the energies of the constitution may be so deeply depressed by the injurious influences under which they have been labouring, that the power of reaction is prostrated, and the indications of the disease are proportionally deficient. It is surprising what an amount of inflammation may be inflicted upon the body under certain circumstances, without its appearing sensible of its presence.

This want of reaction will generally bear a proportion to the depressing nature of the poison, or of any other cause which has been previously in operation; thus, **the poison of measles does not generally exert any very lowering influence upon the system, and the signs of pneumonia, when it occurs, are sufficiently indicative.** On the other hand, with the extreme prostration which attends the presence of the typhus poison, the greatest vigilance is necessary to render ourselves aware of the occurrence of the inflammation. Such differences arise, not from any diversity in the inflammation itself, but in the circumstances under which it takes place.

Nor is pneumonia singular in this respect; other inflammations, occurring under the like conditions, may be equally insidious. In puerperal fever, e.g., we not infrequently meet with instances in which inflammations of other solid organs, of the serous membranes, or of the joints, even runs on to suppuration, without its presence having been ascertained until it has been revealed by a post mortem examination. In the 2 cases which form the subject of the present remarks, the inflammation affected both lungs.

This is consistent with the usual operation of poisons, and warns us, when we encounter the disease on one side only, to keep our attention alive to the condition of the opposite side.

The Inflammatory Fever

In cases where a specific poison exists in the blood, the inflammatory fever is, of course, merged in the peculiar fever which attends the operation of such poison, and is of a low type. Where no specific poison is present, the inflammation may set in with a rigour, and sometimes with sharp feverish reaction; but the symptoms speedily assume an asthenic character, and may be attended, even at an early stage, by delirium and other serious symptoms; and the patient may manifest a marked tendency to sink. In all these particulars, however, there is great variety. In a case of uncomplicated pneumonia, which I saw the other day, the pulse sank below 100 after the 3rd day. In another similar case, in which both lungs were involved, the intellect was clear, and the pulse was below one hundred after the third day; whilst in 2 others, in each of which only a single lung was affected, the pulse was rapid; there was low delirium, and in one, retching, diarrhoea, and floccitation; and death occurred in both, at an early period, with every symptom of exhaustion. Pain in the flank, or iliac region, is sometimes an attendant of inflammation, probably of the base of the lung. In one remarkable instance, I believe the pain was seated in the pillars of the diaphragm, as it was chiefly occasioned by hiccough, which followed the presence of food in the stomach, and was so intense on any attempt to move the trunk, that it was next to impossible to examine the posterior region of the chest. You may, perhaps, expect me to assign the absence of the chlorides from the urine as an additional diagnostic sign of the presence of pneumonia; but since attention has been drawn to this subject by the observations of Dr Beale and others, the symptom in question has been found to be by no means peculiar to inflammation of the lungs; but to be present in other forms of acute disease. **Pneumonia, though a sufficiently serious disease, has, if uncomplicated, a strong tendency to recovery;** but this tendency may be overcome by the noxious influence of a poison in the blood, or by a state of constitution in which the powers of the body have been prostrated by debilitating influences. **Hence your judgment will be regulated rather by those symptoms which relate to the state of the patient's general health, than by those which indicate the extent of the inflammation. The same circumstances will influence the progress of recovery.** A state of cachexia will not only retard this process, but may even turn it into a very unfavourable direction. **It promotes degeneration rather than repair,** and hence may create a tendency to suppuration or gangrene. We had a striking illustration of the truth of what I have said in the hospital the other day (British Medical Journal, 7 May 1859). **There is one awful accident which sometimes happens in this disease, of which it is very necessary that you should be aware the occurrence of sudden death by fainting.** I have twice seen this unhappy termination to the low form of Pneumonia; and once to acute bronchitis occurring with miliary tubercles, and with the heart in an early stage of fatty degeneration, 2 of the 3 patients had suffered from much anxiety, and from overwork. I have also been told by a friend, of a case of subacute pleurisy, in which death took place in the same manner. **Pneumonia, when uncomplicated, Has A**

Natural Tendency To Recovery. Now in the disease in question, the concurrent circumstances indicate either that **the cause itself of the inflammation seriously depresses the nutritive powers, or that it is allied with some other agency which tends to produce the same effect; and we have to do our best to prevent the favourable tendency of the inflammation from being overborne. The object of stimulants is to keep up the energy of the circulation; and their employment must be regulated by the state of that function. It will, therefore, be desirable not to load the blood with an unnecessary quantity of excremental matter, especially when so important an Emunctory for carbonaceous matter as the lungs, is diseased. I need not say that due attention must be paid to the state of the secretions, and particularly to the alvine evacuations; and that while you secure the necessary relief to the action of the bowels**, you must avoid weakening your patient by the undue administration of purgatives, particularly those of the more powerful class. **Support, by light, nutritious diet, is of great importance.** By the judicious administration of beef tea, in small quantities, at short intervals, you may, in mild cases, even avert the necessity for stimulants, or at least for those of the stronger kind." - Dr J. Russell, MD, in "Clinical Lecture On Asthenic Pneumonia, Delivered To The Students Of The Birmingham General Hospital", The British Medical Journal, 2 July 1859.

Fainting: Important To Note

If a person Faints (lose consciousness – fainting / syncope - from a brief lack of blood flow to the brain. Don't Allow the Person to Fall, but gently Lay Down the person. Don't Hold the Person Up. If the person is held in the standing position, it will delay recovery, blacking out when standing up (syncope), happens due to a sudden drop in blood pressure (postural hypotension), where blood pools in the legs, depriving the brain temporarily of Oxygen. Gently lay down the person, in order to Increase the Bloodstream Flow to the Brain. For Fainting will occur, if there is an impediment to the flow of the blood, to the central portion of the system, and reacting to the pulsations or to the nerve forces in the head, causing a lack of coordinating and equalization in the circulations through the system. If you cut off the circulation, you certainly feel faint. The effect of poisons upon the general circulation, Toxic Forces, which produce Weakness, and incoordination in the Body (these from poor circulation, incoordination of organs with the eliminations), these allow for fainting, thus more Open Air (Oxygen) is helpful for the body. Take that, that acts as a stimuli to the respiratory system, as will allow the oxygen through the lung area to be more effective in clarifying the blood supply. Faint spells, can be resolved through the activity of the heart, by the application of Colonic Irrigations, Osteopathic Manipulations, Chiropractic Adjustments, Healthy Diet, Open Air, these will bring change for the Circulatory System, allowing the respiratory system to act, and be active with the system so that the circulation will relieve it.

The Sequels of Scarlet Fever and Measles

"As far back as the year 1843, I published in the pages of the Gazette some pathological remarks on scarlet fever, showing that this disease is, at a certain period of its course, an inflammatory one, requiring the aid of antiphlogistic measures.

As my experience enlarged, my views become, of course, wider, and I was able to compare scarlet fever with other disorders, especially with measles.

It is not generally admitted, even if it be understood, that there is an essential difference between scarlet fever and measles exhibited in the particular mode in which the poison of either disease subsides of itself, or is eliminated from the constitution-the one subsiding or settling upon the liver, or being eliminated through it, and the other subsiding or settling upon the kidneys, or being eliminated through them.

Whatever depresses the vital forces is the cause of struma - a cause whose habitation is favoured by the congenital or acquired debility of the great nervous centres - the cerebro-spinal axis, which, in the discharge of its several functions, betrays a greater or less imperfection in their respective failures.

Measles and scarlet fever, both of them being a poison eventually set free, the latter through the kidneys, and the former by the liver.

I appeal to those who have carefully attended to these two diseases, and request them to consider whether they have not observed diarrhoea follow upon measles, and renal affections succeed to the scarlatina?

The 3 great Emunctories of the frame, are the lungs, the liver, and the kidneys, by the kidneys are eliminated the azotised or nitrogenous compounds in a fluid form, by the liver the carbonaceous materials in a solid form, and by the lungs the same carbonaceous materials in a gaseous or aerial form - namely, that of carbonic acid gas.

Cruveilhier, in some very striking experiments, has shown, that, **by introducing certain heterogeneous particles into the blood through the veins, one or other of these 3 great Emunctories becomes deranged according to the kind of poison or obstruction that has been introduced.**

The first effect of these deleterious substances is on the veins themselves, that is to say, provided that these substances are arrested in their course before reaching the arterial branches or ramifications of the circulating tree, producing pus in the veins phlebitis, in fact, gangrene, and death.

But if these heterogeneous particles pass forwards from the veins into the arteries, their ultimate effects fall upon the more vital organs far removed from the seat of the original mischief, giving rise to abscesses in the muscles, the joints, the eye, the liver, softening of the various tissues, inflammations in distant organs, depositions of pus, blood, lymph and serous effusions.

Gaspard agrees with Cruveilheir in asserting that, in its course along the current of the circulation, the poison finds great difficulty in its transmission from the arterial to the venous capillaries; while Cruveilheir remarks that, in

successful cases, the poison, when dilute or in small quantity, is eliminated by intestinal or urinary excretion, but that, when large or concentrated, it kills.

Tiedemann and Magendie have, indeed, put the question almost entirely at rest by their experiments, which demonstrate that the liver and the lungs are the 2 great Emunctories of the frame; and it is owing, perhaps, to this, says Dr Ferguson, who has written very ably on this point of pathology, and from whose work on Puerperal Diseases the foregoing observations are chiefly borrowed it is owing, perhaps, to this, that they (the lungs and the liver) are, of all the organs of the body, the seats of the greatest number of maladies.

Surgeons know well enough the fever that follows upon amputation when the veins have been injured, or have become the focus of suppurative inflammation, a fever, which is well known to them in its source as it is in its almost invariably fatal issue.

And the accoucheur knows far better than I am able to describe to him, the formidable symptoms of puerperal peritonitis, its rapid progress, and its lamentable catastrophe, a catastrophe originating, as Cruveilhier has so picturesquely portrayed, in a pathological condition both of the womb in particular and of the constitution in general, precisely similar to that following upon the amputation of a limb, or **the introduction of a morbific poison into the veins; deranged excretions, pus, &c., together with inflammation of the veins, (phlebitis) disturbed circulation, typhus fever, delirium, purulent infiltrations, and death. In fact, the patient dies of poison.**

It is probable that some of the symptoms of the hectic infesting the last stages of phthisis pulmonalis may be attributable to the absorption of pus from the lungs, and that the colliquative diarrhoea which precedes the end may arise from the purulent matter continually welling up from the ulcerated lung, and as frequently swallowed as spat out by the patient; for the pus thus swallowed carries with it the germs of struma, and infects the intestinal glands with it; besides which, diarrhoea is, as is generally known, one of the modes by which pus is evacuated from the system.

I have been led to introduce these remarks in order to show that it is not a private opinion of my own, but that it is the conviction of some of the most approved pathologists in Europe, that the mass of circulating blood may be poisoned, and that the poison thus circulating is eliminated from the blood through the channel of one or other of the 3 great Emunctories of the frame.

Thus, it will be found that, after the measles have passed by, and the eruption has effloresced and disappeared in the usual way, there supervenes a stage characterised by gastrohepatic symptoms, eruptions at the angles of the mouth, or sore eyes, (lipitudo, or chronic conjunctivitis of a scrofulous aspect).

The liver is either directly or indirectly brought to a halt; there is black or pale, and eventually exceedingly yellow, bile. The countenance becomes flush and excited, the sleep disturbed, the appetite diminished or lost, and the pulse and heart's action accelerated. It may be there is bilious vomiting or diarrhoea, in which what is popularly called “an overflow of bile”, shows itself.

On the loss of appetite quickly follows failure of strength, and with the hurry of the pulse is associated fever.

Now, **if the poison of measles be not eliminated through the liver, or if the liver remain torpid and inactive even under the exhibition of its ordinary medical stimulants or reagents, it will follow that the fever runs into the type of what is usually known as infantile remittent fever**, that is to say, a fever with irregular intermissions, chiefly affecting the mucohepatic surfaces, and continuing from one to 6 or 8 weeks.

During his anxious interval, there will be observed obstinate derangement of the entire alimentary canal, a very white tongue, costive or relaxed bowels, thirst, absolute loss of appetite, debility, delirium, emaciation, and death; or, on the contrary, instead of death, recovery from the lowest and most alarming stage of attenuation and decline.

The most favourable crisis is vomiting - the vomiting of yellow or green bilious matters, or diarrhoea, sudden and unexpected, by which the alimentary canal is discharged of its morbid contents, or the liver is emulged of its overloaded or poisonous congestion.

But if this diarrhoea or vomiting do not take place, the fever proceeds, and may, after having lasted a certain number of days or weeks, subside by leaving the little sufferer as thin as a ghost and as pale as the waning moon.

When we consider that the kidneys, the great Emunctories of those deleterious elements, which, if retained within the round of the circulating blood, act as a specific poison on the brain, are the organs primarily and chiefly affected, there can be no hesitation in declaring, that, if their natural or normal tone be not restored at once, death must, sooner or later, be the inevitable result.

This is the simple fact.

The inflammation of scarlet fever is, by one of the hitherto unexplained operations in disease, translated from the skin to the kidneys, which, when thus attacked, are no longer able to excrete the nitrogenous compounds from the blood, and, consequently, become the immediate instrument for interrupting and putting a stop to the functions of the arterial and cerebro-spinal systems together; for, if these nitrogenous or azotised materials be not excerned, but are retained and sent back on the brain, they operate as a direct poison, depress the vital forces, and eventually disable and annihilate the whole process of life.

The truth is, when, upon discovering that after scarlet fever the urine contains no lithic acid, nor any of the lithates, (the lateritious deposit of health), but that, on the contrary, it betrays the presence of the phosphates, or albumen, or blood, (hæmaturia). The result of renal disorder in consequence of scarlet fever, is profound debility, a debility which, as it generally happens at an early or a premature age, it is very mournful to witness.

At its commencement there is doubtless a stage of inflammation.

It is during the inflammatory stage that the brain is troubled with meningitis, a kind of inflammation by no means uncommon in connection with primary or secondary disorders of the kidney.

One of the saddest results is, that, as the brain declines in power, stimulants are proportionally more and more requisite; for the sinuses of the encephalon are, from their anatomical construction, incapable of contraction, and, consequently, cannot accommodate themselves to the diminished stream of blood.

Now, as the heart declines in power, the jet of arterial blood thrown up into the brain is depressed, the same stream does not continue to reach the great nervous centres, energy declines, and, with the loss of cerebral energy, declines pari passu the tonic functions of the spinal cord and the kidneys.

Thus, power is lost, and with the loss of power in general is also lost the particular energy to excern **the lithates - those poisonous elements of the circulating mass of blood:** in short, all is lost, except under the pressure of ardent spirits and the highest therapeutic tonics, which can, however, be sustained only for a limited length of time. The glands of the neck inflame, indurate, and run into suppuration: the pus is discharged, ulceration ensues, and sometimes lays bare an extensive surface: the limbs become cedematous, the cellular or areolar tissue mortifies over those points of bone unavoidably pressed upon by the bedding, the entire skin becomes white, dry, and furfuraceous, and anasarca is formed. The progress is soon told. The phosphatic diathesis is established. In protracted cases, renal calculi are formed and passed, life is prolonged, but the patient is cut off from the fellowship of life, and death calls him to his account by means of dropsy, paralysis, or coma." - J. A. Higgenston, Brighton and Sussex Medico-Chirurgical Society, 5 August 1847, in London Medical Gazette.

Prophylactic Treatment of the Sequela of Measles and Scarlet Fever

"Prof. Scoutetten, Chief Physician of the Military Hospital of Metz, advises **frictions with warm sweet-oil all over the body,** the face included, when the redness is gone. After this friction the patient is replaced in bed, where he should remain about 2 hours.

The next day he should take a warm bath, and remain in it 1 hour.

After the bath, he is replaced in bed, and 2 or 3 hours afterwards, when the skin is quite dry, another friction is made similar to the first.

This is generally sufficient to ward off the unpleasant and well-known sequelæ of the 2 above named Exanthematous Fevers; but when the attack has been violent, and the dead epidermis has not completely fallen off, these means should be resumed until the dermis has regained its functions.

Scoutetten **has rarely gone beyond 4 frictions and 2 baths.** These precautions being taken, the patients can, according to the author's experience, go out with impunity." - in "St. Louis Medical and Surgical Journal", 1860.

The Importance of Iodine

“Dr Heintz, of the University of Erlangen, has an article on this subject in a recent number of Virchow's Archiv.

His investigations into the behaviour of iodoso-benzoic acid and on the influence of the iodine alkalis on absorption are of special interest.

Iodoso-benzoic acid discovered by V. Meyer, possesses the property when applied locally of splitting off free iodine in contact with iodine alkali circulating in the blood.

The author attributes the resorptive properties of iodine to its influence on the leucocytes the leucocytosis that follows the introduction of iodine also follows the introduction of indifferent salts.

It might be supposed that the iodine alkali in the blood or tissues was split up in the region of greatest tissue change therefore in the leucocytes, the free iodine then acts back on the leucocytes and excites them to greater resorptive activity.

The Treatment of Chlorosis and Anaemia

A recent writer on this subject is Dr Frieser, who devotes an article to it in the Klin. Therap. Wochensch., 42 99.

According to him treatment must take three directions: the direct medicinal, the symptomatic, and the hygienic-dietetic, and he must first of all seek to restore the lost equilibrium of iron in the system.

To this end resorbable and assimilable iron must be introduced into the system in sufficient quantity, care being taken not to disturb the digestion.

He would exclude all the inorganic preparations of iron, as they are inferior to the ferratin.

Dietetic hygienic treatment embraced all the measures necessary for ensuring a well - regulated mode of life.

First of all everything that interferes with the function of the bowels must be removed.

The food must be easily digestible, non-irritant, and as varied as possible. The chief food must be milk.

But milk cannot always be taken in sufficient quantity by adults , it sometimes causes diarrhoea and a constant feeling of fulness. Patients must be careful , and be protected from overwork.

As regards Hydro-Therapeutics daily rubbings are useful, and act beneficially on the general health and on the strength; Massage and faradisation are sometimes exceedingly useful in anæmics.” - in “The Medical Press”, 6 December 1899.

Iodine A Major Factor in the Treatment of Fevers

"Prior to 1910, was used as a household remedy for fevers. In 1910 it was used as a last resort to treat Dr Bisey who was dying of a severe malaria infection, and made a miraculous recovery. As a scientist, chemist and consulting engineer and friend of Mahatma Gandhi, Dr Bisey was so impressed with the potential of the iodine compound that he subjected it to thorough chemical analysis and research. The result was BESLIN, that stood for "Best Liquid Iodine", which was marketed in England in 1913.

Dr Bisey settled in the United States in 1917, establishing the American Beslin Corporation, in Delaware. In 1926 Laboratoire Durveaux purchased the Beslin Corporation. The New York-based company engaged in clinical studies and collection of medical data, and testimonials on BESLIN." - in "Atomidine", ChemEurope.com, 2024.

"The nascent reacting iodine that was used for many illnesses during the 1930's was distributed by Schieffelin and Co.

They sent a survey questionnaire to several thousand physicans, and dentist who had tested it clinically. They received over a thousand responses.

A Druggist Circular was produced, and a portion of that is copied below.

A nascent reacting iodine that is produced by the same method used by Sunkar Bisey." - John Brookshire, in "Rapid response to: Traditional herbal medicines for malaria", British Medical Journal, 11 November 2004.

Atomidine in Medicine

Made and Distributed by Scheffelin & Co.
For Atomidine Company, Mount Vernon, New York
Druggist Circular, 7 March 1933

"Atomidine (BESLIN), is a stable compound of iodine in a saline solution that liberates the element in an atomic or nascent state on contact with an excess of solvent, such as the fluids of the body. No other active medicinal agents are present. By liberating nascent or atomic iodine, Atomidine furnishes the organism with this element in such a form that it may be readily utilized.

The lethal dose of Atomidine in animals is very large, which accounts for the absence of untoward effects in its clinical use.

Due probably to its rapid absorption and its ready combination with harmless proteid or other organic compounds in the body, iodism very rarely occurs even in sensitive persons. **Atomidine acts beneficially in iodine deficiency diseases, gastro-intestinal disorders, and asthenic conditions.**

It has the property of reducing blood-pressure in cases of hypertension. Atomidine is an efficient diuretic and urinary antiseptic, acting in either an acid or alkaline medium.

Dosage

Approximately 1/100 grain of iodine is present in 1 drop of the solution.

The average dose is 5 to 10 drops in one-half glassful of cold water, repeated every 2 or 3 hours.

Frequent small doses are more effective, than larger amounts at less frequent intervals.

When an intensive effect is desired 20 or more drops may be administered over the critical period and repeated as required.

Atomidine should be diluted only at the time of taking, and never given after a starchy meal.

It should not be administered in combination with other drugs.

Atomidine is a scientifically prepared ethical product of Atomic Iodine, endorsed and prescribed by many leading doctors and is the culmination of many years of research work of Dr S. A. Bisey, scientist and inventor.

Since its discovery in 1914, it has been the first and foremost ethical preparation of iodine that liberates Atomic Iodine upon contact with body fluids.

It is Non-Poisonous, Non-irritant, Stainless, Odourless, and a Water Soluble compound, safe for internal administration.

During 12 years of test period and research work it received endorsement from the medical profession as a recognized product of high medicinal and scientific value and one of the greatest contributions to Materia Medica.

This led to the adoption of its scientific name Atomidine (atomic iodine) in keeping with medical terminology, by which name it has been known since 1926.

Thousands of doctors in America and other countries have prescribed Atomidine and have reported splendid results in a wide range of diseases.

We have in our files many hundreds of clinical, chemical and case reports, together with testimonial letters and articles published in medical journals with clinical testimony supporting the various claims made for Atomidine.

Following are brief excerpts from typical expressions of the Medical and Dental professions.

Atomidine In Dentistry

Atomidine is the remedy of choice wherever a powerful non-irritating antiseptic and germicide is required. In post-operative cases, such as tooth extraction, Atomidine cannot be recommended too highly.

It acts as a hemostatic and is non-escharotic. When applied to the tooth socket in the pure state there is an immediate blanching of the tissues with an arrest of hemorrhage. An almost complete freedom from pain is observed in extraction and oral surgery operations wherever Atomidine is used as a post-operative application. Atomidine stimulates the growth of tissue. Two or 3 days after an extraction and the application of Atomidine, the socket is filled with healthy granulations. Atomidine is a scientifically prepared ethical product of Atomic iodine, endorsed and prescribed by many leading doctors and is the culmination of many years of research work of Dr S. A. Bisey, D.Sc. (Hon.), distinguished scientist and inventor. Since its discovery in 1914, it has been the first and foremost ethical preparation of iodine that liberates Atomic Iodine upon contact with body fluids. It is non-poisonous, non-irritating, stainless, odourless and a water soluble compound, safe for internal administration. Atomidine is manufactured and distributed by the well known manufacturing pharmacists, Messrs. Schieffelin & Co., of New York. In its early years it was known under various names. During 12 years of test period and research work it received endorsement from the medical profession as a recognized product of high medicinal and scientific value and one of the greatest contributions to Materia Medica. This led to the adoption of its scientific name Atomidine (atomic iodine) in keeping with medical terminology, by which name it has been known since 1926. Thousands of doctors in America and other countries have prescribed Atomidine and have reported splendid results in a wide range of diseases.

We have in our files many hundreds of Clinical, Chemical, and Case Reports, together with; Testimonial Letters, and Articles published in Medical Journals, with Clinical Testimony supporting the various claims made for Atomidine. The following are brief excerpts from typical expressions of the Medical, and Dental professions.

Medical Reports Show 96% Favourable Results

Report received from 1241 physicians and dentists shows that out of 18,186 cases of 21 different diseases treated by them, 17,507 (96%) were reported with favourable results thus proving the efficacy, reliability and sterling merits of Atomidine.

Physicians And Surgeons Reports Therapeutic Effects

"In the Atomic form iodine exerts in the system its maximum of beneficial effect, witout the irritating, depressant and escharotic action prominent as by results of the molecular form-tincture, or salts of iodine." - in Report 2118.

"Atomidine has given me gratifying results both through its external application and internal use. Why should I not endorse and recommend Atomidine to all?" - in Report 2258.

"It is the most satisfactory germicide and antiseptic that has ever been produced up-to-date. It has the peculiar and valuable property of not only sterilizing the ordinary pus organisms but the Anaerobic type as well. It has the individual property of deep penetration and most valuable property of actually stimulating cell repair. First and foremost a water-soluble iodine. This is entirely a new accomplishment in the field of chemistry. Liberating as it does the true element in an Atomic state, makes it possible for the first time in the history of medicine to utilize the basic element in the purest known form for internal administration." - in Report 117.

"There is no doubt about the Excellence of Atomidine. In fact I am using it in the treatment of so many different diseases with such satisfactory results that it seems to prove to be almost a cure-all. But there is no argument against facts." - in Report 2220.

"Many preparations on the market kill disease germs but play havoc with the body cells. This we find impossible with Atomidine. It is a triumph of biological science and one of the greatest contributions to Materia Medica." - in Report 1942.

"Having had a tremendously wide experience with antiseptics and germicides, I feel qualified to make this positive statement; to wit; that there is no such preparation existing today, that meets with the requirements of modern surgery so well as Atomidine. It has the peculiar property of activating the growth of normal tissues." - in Report 1944.

Gastro-Intestinal and Urinary Disorders

"Out of 540 Gastro-Intestinal cases, 494 with favourable results. Out of 691 Urinary Disorders, 614 with favourable results." - in Medical Report 1559.

"Good results in several cases of Gastro-Intestinal Disorders." - in Report 1693.

"Stomach Ulcer cases are all well. Full recovery. Quite a feat as those were old ones and medical men were quite helpless." - in Report 1976.

"Satisfactory in Gastro-Intestinal Disturbances." - in Report 2089.

"Another intensely valuable property is its undoubted active therapeutic effect in the control of putrefactive and fermentative conditions of the Castro-intestinal tract." - in Report 117.

"Gastro-Intestinal Cases cured with Atomidine." - in Report 2258.

"Stomach Troubles responded liberally as well as Urinary Disorders." - in Report 127.

"Genito-Urinary Infections out of 320 cases, 84 Cured, 216 Improved." - in Hospital Report 1935.

"Diseases of Urinary Tract, I cured about 20 with very nice results." - in Report 1934.

"As a Urinary antiseptic in the presence of inflammation in the urinary tract, Atomidine, I find superior to any others." - in Report 1945.

High Blood Pressure

“Out of 1029 cases decided, 978 with favourable results.” - in Report 1559.

“I have found a medication to reduce blood pressure.

A woman 80 years of age, blood-pressure 210, Atomidine given in 10 minim doses 3 times daily for 5 days.

The blood-pressure was reduced to 160, 5 more days effected a reduction to 148.” - in Report 190.

“Find it does not produce iodism. Use it myself for high blood-pressure. Other iodine preparations give me iodism very quickly.” - in Report 1581.

“Woman age 50 with a pressure of 285. Took it 3 times to make sure.

Placed on 15 drops of Atomidine 3 times a day for 2 weeks.

The pressure went down to 240, patient much improved. Man age 65 with a pressure of 180 - placed on Atomidine. Pressure down to 150, patient doing very well.” - in Report 1162.

“Found it very reliable drug in controlling high blood-pressure.” - in Report 115.

“A woman complaining of violent headaches, dizziness, fatigue on slightest exertion. On taking the blood pressure, imagine my alarm at finding it was 280.

Today, only 3 weeks later, she was helping her husband in the field.

Her husband is overjoyed and she herself is singing my praises to the neighbours.

What did I give her?

Ten drops of Atomidine in half a glass of water 30 minutes before meals.” - in Report 1688.

“Case of Hypertension with considerable discomfort from dizziness and pounding in the head. These symptoms have improved. The blood-pressure dropped to 150 and this has been with no gastric distress.” - in Report 1742.

Iodine Deficiency Diseases

“Out of 583 cases decided, 558 with favourable results.” - in Report 1559.

“I use Atomidine always as the remedy of choice where Iodine is Indicated in deficiency diseases. The action is prompt.” - in Report 1945.

“This form of iodine is without question our most valuable therapeutic agent for the prevention and treatment of Goitre.” - in Report 117.

“Had wonderful success with Atomidine. Good results for Goitre.” - in Report 1778.

“Use Atomidine regularly for furnishing iodine to the system.” - in Report 1943.

“Used Atomidine when iodine is called for. It is clean, no stain, and effective.” - in Report 2022.

“Excellent results in goitre of young girls.” - in Report 2031.

“All cases where iodine is indicated. Works wonders with children.” - in Report 2106.

Malaria And Tropical Fevers

“Malaria Fever, intermittent type.

Troubled with it years before. Gave Atomidine. In 3 weeks no trace of malaria remained. I gave all blood tests. No return of the ailment.” - in Report 1959.

“Malaria: Treated 40 cases. Your discovery is going to make a revolution in the world as the best remedy for Tropical Fevers.” - in Reports 252 and 1934.

“Atomidine is an asset to the tropical medicine. Its virtues are unsurpassed in treating various tropical fevers.” - in Report 1936.

“Male patient, tertian malaria proven by slide. Contracted malaria 18 years ago. He was treated in the American Hospital but suffered relapses.

Since the time he took Atomidine he is free from fever.

Took 3 more slides, all negative.

The last 2 years he never had fever for 1 day.” - in Report 1937.

“Successfully tried several cases of malaria influenza and other fevers.

Temperature becomes normal within 24 to 48 hours without causing any harmful or depressing effects on the heart or reducing the vitality of the patient.” - in Report 1942.

“Dengue fever, blackwater and all types of malaria are brought under control within 48 hours. Fever in general disappears after the 3rd day.

The general weakness following all fevers disappears within a week. In no case gastrointestinal symptoms found to appear as in the case of Quinine in fever.”- in Report 1967.

“In fevers it is very fine and the improvements are soon noted. It is non-toxic and does not leave any untoward after effects to be feared.” - in Report 127.

"Influenza: 53 Cases treated, all with Favourable Results." - in Report 1559.

"A case of 3rd day chills. Gave Atomidine 4 weeks ago. Not had any more chills and feeling fine. So a great discovery, I think." - in Report 2154.

"Found Atomidine superior to Quinine, as it promptly checks chills and brings the fever under control within 24 to 48 hours and there is a complete absence of undesirable symptoms associated with the use of quinine. Atomidine is well tolerated by the system." - in Report 2159.

"Used Atomidine in obstinate cases of malaria fever with splendid results." - in Report 2178.

"Results have been very gratifying in the treatment of malaria. Treated 5 cases. In each case temperature dropped to normalcy in a few hours and had no return of chills or fever." - in Report 2164.

"Used Atomidine in 4 cases of malaria with splendid results. All symptoms subsided. Appetite greatly improved. Blood smears negative for malaria." - in Report 2181.

"Pleased at results obtained in treating malaria with Atomidine. Your preparation will have wide field of use in malarial conditions." - in Report 2221.

"Used Atomidine in a case of tertian malaria, with splendid results. Blood negative on all forms in 5 days." - in Report 2230.

Venereal Diseases

"Neisserian infections; 58 cases under observation, 28 cases show negative smears, decrease in the amount of discharge, disappearing of erosions, 11 cases show no improvement as to the amount of cervical discharge although smears were negative, 16 cases left the hospital." - in City Hospital Report 1645.

"Tried Atomidine over Venereal patients and found a really responsive product. See no reason why every practitioner cannot get similar results." - in Report 2134.

"In chronic gonorrhoea cases of both sexes improved immediately the vital resistance of the patient, alleviating at once the genito-urinary symptomatically. Good benefits results in cases of syphilis in its 2nd and 3rd state." - in Report 1655.

"Urethral Gonorrhoea, associated with streptococci infection. Atomidine was given internally. Injections were given in Urethral tract. In 3 weeks the case was negative to both gonorrhea and streptococcus." - in Report 2166.

"Found Atomidine an excelled in the treatment of Syphilis. Treated 50 cases." - in Report 2159.

"Using Atomidine in preference to K.I. In Lues (syphilis)." - in Report 1594.

Eye, Ear, Nose and Throat

"Throat Infections: Out of 1,155 cases decided, 1,122 with favourable results." - in Report 1559

"5 to 10 drops of Atomidine put into one ounce of water makes an excellent collyrium (eye lotion). I have used it on my servant girl in a severe inflammation of both eyes - of uncertain origin and diagnosis - that had resisted several kinds of treatment during 3 months.

Above mentioned collyrium put into her eyes 2 drops 2 or 3 times a day. It had completely cleared up in 1 week." - in Report 2180.

"During the past 5 years I have been trying different drugs to shorten the purulency of a supperating middle ear.

Recently I have been trying Atomidine in a preparation which produces nasent iodine. I used 1/2% in oil. (A special preparation of Atomidine in oil, made according to the specifications of a leading Nose, Ear and Throat Specialist, is available on request). The strength not only did not give pain but was distinctly beneficial. A series of cases was subjected to it with cures in 1 week to 2 weeks. Tried it with maxillary antritis (Inflammation of the maxillary sinus) cases with striking benefit.

Whatever specific action Atomidine has, antiseptic or cytefacient is not known, but there is a cessation of the discharge and the local protection is increased." - in Ear, Nose and Throat Clinic, Report 1741.

> *"Sinus infection: Nothing seemed to help except Atomidine, and this is an unusually difficult case where everything failed." - in Report 1953.*
>
> *"Fine remedy for sinus trouble. I use a lot of it." - in Report 1635.*
>
> *"I used it several times on a chronic sinus where tonsil had been removed. The sinus is apparently well. I have cured 2 cases of chronic otorrhea with diluted solution." - in Report 2259.*
>
> *"Worked very well." - in Eye and Ear Infirmary, Report 1859.*

"Pharyngitis, and Tonsillitis cases under observation, 52.
In 47 cases improvement occurred within 3 to 5 days with subsidence of pain, fever and congestion. The solution was employed in swabbing the throat thoroughly." - in City Hospital, Report 1687.

"Found satisfactory in the treatment of sinus infection, acute and chronic." - in Report 2052.

Bronchitis and Asthma

"Had chronic Bronchitis for over 7 years.
Tried many doctors and remedies, with no success.
Took 3 bottles of Atomidine. I am now well.
No signs of old trouble since.
Recommend it to all my patients. Worth all that is claimed for it." - in Report 1947.

"Bronchitis: 15 cases treated, all with favourable results." - in Report 1559.

"Had most excellent results in all the treatment of Asthma and Bronchitis." - in Report 2254.

"Chronic Bronchitis case responded nicely after taking Atomidine." - in Report 2259.

"Very good success in relieving a case of Bronchial Asthma." - in Report 289.

"Good results in Chronic Bronchitis." - in Report 1565.

"Fine for Acute and Chronic Bronchitis." - in Report 2064.

"Found satisfactory in the treatment of Bronchitis and Asthma." - in Report 2077.

"Atomidine three times daily stopped persistent cough of long standing." - in Report 2165.

Arthritis and Joint Diseases

"We have used Atomidine and found it satisfactory in every way." - in Hospital for Joint Diseases, Report 124.

"Arthritis: out of 265 cases, 53 cured, 185 improved." - in Sailors Hospital, Report 1935.

"Tried on Arthritis patient who had right knee and wrist swollen, and very painful on least movement.
In 3 days she could move the knee and wrist a lot better and less pain." - in Report 2157.

"I have found Atomidine unexcelled in the treatment of Rheumatism, treated 50 cases." - in Report 2159.

"Atomidine has helped me personally - the old rheumatic condition gave way to your 'Water Soluble' iodine compound." - in Report 130.

"Got excellent results in a case of Arthritis of the knee." - in Report 197.

"Found satisfactory in the treatment of Chronic Rheumatism." - in Report 2086.

Acute Infections

"Out of 515 cases decided, 483 with favourable results." - in Report 1559.

"Severe case of Ivy Poisoning. Found it to be almost a specific." - in Report 226.

"Case Reports:

1. "Had been in a local hospital for 7 months with streptococcus infection.
Draining pus from 7 incisions.
Prescribed Atomidine.
In 2 months most of the wounds healed.

2. Severe infection of toe nail, septic poisoning set in.
Gave Atomidine internally.
In 4 days the infection was cleared up.

3. Leucorrhea discharge which had resisted every form of medicine.
Prescribed Atomidine douches.
In 2 weeks discharge stopped and the female organs resumed their natural position." - in Report 206.

"I have prescribed Atomidine in many hundreds of cases as a preventive and prophylactic in periods of epidemics with marked benefits. As an abortive in infections it has marked and rapid inhibitory action, proving beyond the least doubt that it has decided internal antiseptic or germicidal action." - in Report 1945.

"Giving it first place, not only in first aid but think of nothing else when I treat infections. It is really wonderful." - in Report 193.

Additional Clinical Data

There are many conditions, not mentioned here, for which Atomidine has been used with good results and due to the fact that it is non-poisonous and non-irritating it has greatly extended the scope of iodine therapy, particularly for internal treatment. **In our files there are several medical Reports as to the satisfactory use of Atomidine in:**

1. **Cancer**
2. **Leprosy**
3. **Epilepsy**
4. **Tuberculosis**

A preliminary investigation as to the use of Atomidine in intramuscular and intravenous injections has been productive of the most gratifying evidence and further research is being conducted for the purpose of putting the preparation in suitable ampules for injection therapy. Further information or copies of medical reports will be gladly submitted on request.

Atomidine Ointment

The valuable properties of Atomidine are incorporated in Atomidine ointment which renders them available for topical applications. Atomidine ointment is a preparation of genuine therapeutic merit that will meet exacting clinical requirements. It is penetrative, non-irritating, emollient, effective in both aerobic and anaerobic infections, it promotes cell metabolism and repair and relieves pain and congestion. Physicians will find it of real value for digital examination of rectum and the female genitalia.

Medical Reports

> ***"First and second degree burns; healing was rapid. Case of Ringworm; removed the itching. Case of Blepharitis; reduced the swelling and itching of the eyelids."*** *- in City Hospital Report 1654.*

> ***"3 Cases of Arthritis Treated with ointment are having very satisfactory results.***
> ***A rheumatic knee greatly relieved and 4 cases of Neuritis are yielding to treatment."*** *- in Sanitarium Report 67.*

> ***"We have given Atomidine good trial and found same very successful. Its merits in skin irritations, burns, boils carbuncles, etc., are unsurpassed."*** *- in Sanitarium Re. 128.*

*"**I have had extensive experience with Atomidine during the last 3 years. It exerts a very deep penetrative and active germicidal effect.** It has the individual and peculiar power of relieving local congestion. **One of the most valuable attributes is its definite ability to stimulate the growth of tissues. I believe it is the most efficacious preparation in the field of medicine for the treatment of sun-burn. I have seen a number of very severe cases of second and third degree burns in which the relief of pain, subsidence of inflammation of the tissues and activation of Repair is truly most remarkable."** - in Report 118.*

*"Used ointment in the case of a scald extending the entire length of the right leg, 2 to 4 inches wide. The skin was entirely denuded. There is a complete healing with natural epidermis and no scar tissue. **I have never seen a scald of such area and death heal without scar tissues or contraction."** - in Report 119.*

*"**Atomidine ointment is always used for the treatment of Burns, Abrasions, Cuts, etc., to the exclusion of all other ointments as we find it superior to any others, for its healing, soothing, antiseptic, and tissue building qualities."** - in Report 1943.*

Atomidine in Dentistry: Dentists Reports

Mouth Diseases	**Cases**	**Favourable Decided Results**
1. Pyorrhea	2,296	2,145
2. Vincent's Angina	884	821
3. Post-operative Cases	8,787	8,714
4. Gingivitis & Antrum	27	27
Total:	11,994	11,707

Hospital Report:

"Pyorrhoea; 8 cases improved with pure Atomidine. Vincent's Angina; 2 cases cleared upon application of pure Atomidine. Smear for spirilli was negative.

Mercurial Stomatitis; 5 cases, cleared up local application." - in Report 1649.

Sanitarium Report:

"Used it in several cases of Pyorrhoea and it has been very beneficial." - in Report 67.

Dental Clinic Report:

"Large number of cases of Pyorrhoea, Vincent's Angina, antrum and post-operative pain were successfully treated." - in Report 27.

Dental Surgeons

> *"Selected cases of Pyorrhoea usually difficult of treatment. Three of the 5 cases entirely cleared of pus within 10 days. In the treatment of putrescent root canals, had considerable success. It is the best oral germicide I have used." - in Report 38.*

> *"23 case reports on Pyorrhoea cases from a Dental Surgeon pyorrhoea specialist. Every case was successfully treated." - in Reports 79 to 101.*

> *"Record of 5 cases of Pyorrhoea chosen because most advanced so would be a severe test for your product. The results most surprising and gratifying. No reason why every practitioner cannot get the same results with it." - in Report 58.*

> ***"Very quick cure for most cases of Pyorrhoea.*** *After 3 injections pus flow stopped, soreness and irritation disappeared, and raped formation of new tissues. Heartily endorse it to the members of the profession as our best remedy to date." - in Report 24.*

"Wonderful preparation, for all forms of mouth infections. I would like to see a Pyorrhoea case that I cannot cure after making diagnosis." - in Report 70.

"Using it for 2 years, found it an exceptional drug in the treatment of Pyorrhoea and various infectious diseases." - in Report 120.

"I found your preparation, all you claim for it. Using it nearly every day." - in Report 306.

"I find it my best friend in all inflammatory conditions of the oral cavity and cannot do without it. It seldom fails in treatment of Pyorrhoea, Vincent's and Root Canal Work." - in Report 105.

"Use it almost hourly in the treatment of Pyorrhoea, Vincent's Angina and find it the most pleasing germicide." - in Report 1712.

"I find it indispensable in post-operative work." - in Report 233.

"Surely it is a good remedy for use right after an extraction case. It seems to work miracles. It minimizes the usual post-operative inflammation and the process of healing is much accelerated." - in Report 1667.

"I want to see the dentists of this country accept Atomidine as a positive cure for Pyorrhoea." - in Report 46.

"Most efficient drug, I have ever used. Worthy of a place in dentist's medical cabinet. I would not be without it." - in Report 1722.

"Find satisfactory in the treatment of dry sockets" - in Report 2150.

"It will cause healthy granulation to start in slow healing sockets." - in Report 2251." - in "Atomidine in Medicine", Druggist Circular, 7 March 1933.

> *"Observations by the Vienna surgeon Professor Schmidt, which took place over decades in his practice,* ***studies in the last 100 years have shown consistently that people who experienced childhood diseases accompanied by fever were less likely to suffer from cancer in later life."*** *- Anita Petek-Dimmer, founder of Aegis Switzerland, in "Does systematic Vaccination give health to people?", 2002.*

Artemisia Annua in the Cure & Prevention of Malaria and Very Likely Other So-Called Diseases

"Artemisinin from the plant Artemisia Annua (A. annua) L, and used as artemisinin combination therapy (ACT), is the current best therapeutic for treating malaria, a disease that hits children and adults.

Traditionally, **A. annua was used by the Chinese as a tea to treat Fever.**

More recently, investigators have shown that tea infusions and oral consumption of the dried leaves of the plant have prophylactic and therapeutic efficacy.

The presence of a complex matrix of chemicals within the leaves seems to enhance both the bioavailability and efficacy of artemisinin.

Although about 1000-fold less potent than artemisinin in their antiplasmodial activity, these plant chemicals are mainly small molecules that include other artemisinic compounds, terpenes (mainly mono and sesqui), flavonoids, and polyphenolic acids.

In addition, polysaccharide constituents of A. annua may enhance bioavailability of artemisinin.

Pharmacokinetics of deoxyartemisinin, a liver metabolite of artemisinin, was more inhibited in infected than in healthy mice.

In healthy mice, artemisinin serum levels were > 40-fold greater in dried leaf fed mice than those fed with pure artemisinin.

Human trial data showed that when delivered as dried leaves, 40-fold less artemisinin was required to obtain a therapeutic response compared to pure artemisinin.

Considering that for more than 2,000 years this plant was used in traditional Chinese medicine for treatment of fever with no apparent appearance of artemisinin drug resistance, the evidence argues for inclusion of affordable A. annua dried leaf tablets into the arsenal of drugs to combat malaria and other artemisinin-susceptible diseases.

The most clinically definitive study to date of pACT efficacy was conducted at the International Centre of Insect Physiology and Ecology (ICIPE) Mbita Field campus, Suba District, in Western Kenya.

This was a collaborative project between ICIPE and Kenya Medical Research Institute and was an open-label, non-randomized clinical trial mainly targeted to assess efficacy, safety, and tolerance of increasing doses of pACT delivered as tablets. Leaves were harvested just before flowering, dried for approximately 3 wk under shade, then crushed, powdered, homogenized, and pressed into 500 mg tablets under ambient temperature. Tablets were robust with no excipient required. Using HPLC with diode array detector, analysis of hexane extracts of randomly selected batches of 100 tablets showed artemisinin content of the tablets was consistent at approximately 3.7 mg per tablet.

The 4 cohorts of the trial each had 12 consenting patients aged 15–56 years (average 23.42) with P. falciparum malaria.

Based on Giemsa-stained blood smears counted against 200 wbc, parasitemia was 0.02%-4% and hemoglobin levels > 8 mg/dL.

Each cohort received one of 4 increasing numbers of A. annua tablets, ranging from 2–5 tablets twice on day 1, followed by 1–4 tablets twice daily for the next 5 days. A week following the treatments, 3 patients scattered throughout different cohorts showed re-appearance of parasites in blood smears; however, all doses were effective in clinical and parasitological regression of malaria, with 9%-20% recrudescence at day 28 and no measurable toxicity.

Conclusions

Evidence is mounting for the therapeutic efficacy of the use of dried leaves of A. annua, pACT, to treat malaria and possibly other diseases.

The complex mixture of antiparasitic compounds in the plant seems to account for its therapeutic activity with animal and human trials supporting this claim. It is also clear that the cost of using pACT is a fraction of that for any other current or emerging antimalarial therapeutic.

Likewise, the recent evidence of persistent and/or asymptomatic malaria suggests that a more prophylactic approach to malaria using pACT or even **A. annua tea may be warranted.**

Considering that for more than 2,000 years this plant was used in traditional Chinese medicine for treatment of Fever with no apparent appearance of artemisinin drug resistance, taken together the **cumulative evidence argues for inclusion of pACT into the arsenal of drugs to combat malaria, and very likely, other diseases."** - in "Dried-leaf Artemisia annua: A practical malaria therapeutic for developing countries?" , World J. Pharmacol., 9 December 2014.

> ***"Fever is a mighty engine which Nature brings into the world for conquest of her enemies."*** *- Thomas Sydenham,*

> ***"Most febrile illnesses last for fewer than 3 to 5 days. During this time, either a specific cause is identified and treated or the fever resolves spontaneously."*** *- in "Acute Fever", Pediatr. Rev., 2009.*

> ***"Nature Alone Can Cure; this is the highest law of practical medicine, and the one to which Tee must adhere. Nature creates, and maintains; she must therefore he able to Cure."*** *- Dietl, 1845.*

The Beneficial Effects of Fever

"The use of fever to treat disease, termed pyrotherapy or pyretotherapy, is a concept that has existed for centuries.

Hippocrates is credited as being the first to make this observation when he noted the beneficial effects of Malaria on Epilepsy.

Galen was the first to note that feverish states had a beneficial effect on psychiatric illness, and Pinel, Esquirol, Briquet, and Maudsley also described similar phenomena. However, pyrotherapy did not reach mainstream psychiatry until the early 20th century, thanks to the Nobel Prize winning work of Julius Wagner-Jauregg, as well as contributions from others.

Wagner-Jauregg first experimented with streptococci, tuberculin, and staphylococci but, because of inconsistent results, he shifted his focus to malaria, specifically targeting its effects on the treatment of General Paralysis of the Insane (GPI), now commonly known as Neurosyphilis.

Wagner-Jauregg's early experiments involved inoculating patients with GPI with blood from individuals with confirmed malaria.

He then allowed the patients to undergo several attacks of fever before treating them with quinine to cure the malaria.

These initial experiments produced very promising results, and malaria therapy was rapidly adopted as the treatment of choice for GPI and other psychotic states.

Wagner-Jauregg's clinic treated over 1,000 patients with GPI with malarial pyrotherapy, with approximately 60% of them experiencing remission to varying degrees." - in "Pyrotherapy for the Treatment of Psychosis in the 21st Century: A Case Report and Literature Review", Journal of Psychiatric Practice, September 2016.

Pyretotherapy In The Treatment Of West's Syndrome

"West's Syndrome is characterized by generalized Myoclonic Spasms, Arrest of Psychomotor Development, and a Hypsarrhythmic Electroencephalogram.

It is a difficult condition to identify clinically and to treat effectively.

The characteristic Electroencephalogram tracing makes the diagnosis definitive.

The synonyms most frequently used are:

1. **Infantile Spasms with Hypsarrhythmia**
2. **Myoclonic Encephalopathy with Hypsarrhythmia**
3. **Salaam Spasms**
4. **Massive Spasms**
5. **West's Syndrome**

This condition was (first) described by W.J. West in "On a Peculiar Form of Infantile Convulsions", Lancet, 1841.

Four cases of West's Syndrome (generalized myoclonic spasms, arrest of psychomotor development and hypsarrhythmia), are reported.

In these cases, High Fever (pyretotherapy) induced by TBA Vaccine (typhoid and paratyphoid) was used. **Within the next 8 days following treatment with pyretotherapy, the clinical conditions of these children showed a gradual decrease of generalized myoclonic spasms and an improvement of their mental and neurological status. The follow-up electroencephalograms showed cessation of the hypsarrhythmia. The study of these cases and their electro-clinical correlates suggests that pyretotherapy is a useful procedure in this extremely disabling condition."** - in "Pyretotherapy as Treatment in West's Syndrome", Clin. Electroencephalogr., 15 July 1984.

Effects of Atmospheric Electricity

"At a recent meeting of the California Academy of Sciences, C. D. Gibbes, C.E., remarked that **when surveying during our north winds, in the San Joaquin valley, the electrical disturbance was so great as to cause the needle of his compass to fly up against the glass and become useless during the first part of the day when in the field; but that if he took the same compass into a warm moist room, it again acted normally. Engineers in Santa Clara and Calaveras counties report the same action and dip of the magnetic needle during the prevalence of our dry northers. Dr Harkness said the northers affected the human skin. They caused an uneasiness, which results in dog fights, runaway horses, cross dispositions, pallid faces, etc.**

Dry asthenosphere is a perfect non-conductor, but all moist plants and animals, as well as men, then become so many miniature lightning rods.

The nerves are at such times continually irritated by a constant succession of tiny blows, like telegraphic ticks, against the nerve centres. They contract and produce a congestion of the organs; the blood becomes turbid, while kidneys, liver, and lungs all suffer. Dr Henry Gibbons, thought this electric action more subtle than from any apparent mechanical evolution of from friction of the passing wind over the surface of the earth.

He said all persons felt cold, for it drove the circulation from the surface to the interior of the body, as Dr Harkness so beautifully described 20 years ago.

Its effect on certain diseases has been marked. The death rate has been claimed to increase at such times. He had a patient whose eyes always blinked and snapped during a wind, even in a warm, moist room entirely protected from direct contact with the wind. Dr Harkness said we were always surrounded by Electricity, but did not perceive it until its equilibrium was destroyed, when it became manifest. In some parts of India silk underclothing is necessary to comfort, at certain altitudes, during dry north winds, and in other parts no relief is found in this clothing." - in "Scientific American", 11 February 1882.

The Toxic Basis of Neural Disease

Section 1

Remarks on the Relation of the Auto-Intoxications to Neural Disease

"At a previous meeting it was my privilege to indicate that certain factors are at hand for the creation of **a new epoch in the evolution of the Pathogenesis of Nervous and Mental Diseases**; especially of the latter.

1. The first and most important of these factors is the precise and definite status which the anatomy of the nervous system attained through the investigations of the past decade by the Golgi methods; the establishment of the neuron theory in particular leads to a definite understanding of the pathology and physiology of the nervous system.
2. A second great factor in this new epoch of neuropathology is the application of the modem doctrine of cytology and its technical methods of research to the investigation of the problems in nervous and mental diseases.
3. A third factor is a realization of the absolute necessity of correlating the nervous system with other organs and tissues in the body in studying the operation of the fundamental and general somatic pathological processes in the nervous system.

I called your attention to the fact, that the progress of the past 10 years in bacteriology and physiological chemistry have gone far toward demonstrating that the great majority, in fact, if not most, of the Processes of Disease in General Are Due To Toxic Substances in one form or another.

It is my profound conviction that in the course of time, the application of this toxic theory of disease to the nervous system is destined to clear away much of the present vagueness and mystery of the causative agents and pathogenesis of mental diseases.

The brain is involved like any other organ of the body, in these general toxic or somatic diseases, and many of the insanities (excluding those of psychic origin) are but the expression of the later disturbance of the functions of the brain dependent upon changes in the nerve cells produced by the action of toxic substances. The relation of the dependence of changes in the nervous system upon general somatic diseases is often thoroughly masked; there may be a long lapse of time between the occurrence of the general body disease, and the appearance of the mental or nervous symptoms due to the damage wrought on the brain, by the toxic substances associated with the acute general illness.

The lapse of time may be so long that the relation between the 2 events is lost track of.

Then, too often have the mental or nervous symptoms been made to appear as due to a pathological process originating de novo in the nervous system, or as an independent, sui generis disease process in the nervous system.

In other cases of neural diseases the general somatic toxic factors act in an intermittent (Epilepsy) or chronic manner (tabes melancholia); these toxic factors (Auto-Intoxications for example), operate slowly, insidiously and persistently. In such instances, associated with chronic parenchymatous degeneration of the nervous system, these somatic causal factors are generally most subtle, unapparent and unobtrusive. Then again the tendency has been to regard the pathological processes in the nervous system as something peculiar to and limited to the neural tissues and as independent of the few great primary pathological processes which alike underlie all forms of disease in all parts of the body.

I may divide the pathogenic toxic substances into 5 groups:

1. **Auto-toxic Substances;**
2. **Bacterial Toxines;**
3. **Combinations of 1 and 2;**
4. **Extrinsic Poisons; and**
5. **Protozoal Poisons.**

Certain general remarks on this classification of pathogenic poisons are necessary before proceeding with the subject of auto-poisons in neural diseases.

Protozoal poisons are only mentioned in this list and can not be considered to any extent in the general text, for too little is known about them or their pathogenic action on the body. **In the one well known manifestation of protozoal poison, malaria, there are decided expressions of a participation of the nervous system in the general poisoning of the body.**

We do not know as yet how many congeners of malaria there may be.

If protozoa are responsible for small-pox, (syphilis) and the exanthem group, a suspicion which I strongly entertain, although merely on the slender tenure of elimination of other classes of poison, **the share of protozoal poisons in the toxic basis of neural disease is profoundly important.**

That the exanthemata are associated with poisons is certain.

Clinical observation shows most decided Poisoning of the Nervous System.

The exanthemata as a group work much damage on the nervous system which by all analogy with other poisons, as will be seen later in this text, ought to be expressed in acute parenchymatous degeneration of the nervous system.

In the case of small-pox for example, there are a variety of permanent sequelae of the nervous system which indicate that the poison may be so severe as to cause an acute degeneration of the nervous system of a more or less destructive determination.

Since the poisons of the exanthemata can not be identified with bacterial, extrinsic or fungus or auto-poisons, and since it is justifiable in science to accept the simplest hypothesis which will explain the most facts, the theory of the protozoal origin of the exanthemata at the present seems thrust upon us.

The question as to what extent the poisons of protozoal diseases are due to the synthetic compounds composing the protozoa themselves, or to the analytical substances which are created out of the tissues by the destructive action of the protozoa, is at present indeterminable.

If animal parasites excrete poisonous substances or create secondary analytical toxic products out of the tissues they infest, a class of pathogenic parasitic poisons should be recognized. If, on the other hand, animal parasites damage an organ so that its chemical functions are interfered with, and a poisoning results, this should be ascribed to an auto-toxic substance, and not a parasital poison.

We know enough, of the action of bacterial toxaemias to be sure that they must frequently concomitantly engender auto-toxic substances.

Hence the third class of poisons is a practical one and has a more or less definite basis for its existence. **The first group of these poisons (auto-toxic) merits much consideration because it will probably come here long to be recognized as a factor of great importance in the production of mental and nervous diseases.**

As yet, however, we are but on the threshold of our knowledge of auto-intoxications; only comparatively recently have a number of diseases been wrested from the mysterious domain of the old humoral doctrine of disease and placed in the autotoxic category; and undoubtedly many more obscure diseases, especially of the nervous system, are to be added to the list. It is more appropriate at present to indicate the confines of auto-poisons as a separate group, than to attempt a definition of auto-intoxication. It would seem comparatively simple at first glance to define the auto-intoxications from other forms of poisoning, by saying that this group of diseases is due to the action of poisons created within the body by the somatic chemical agencies. But all forms of disease are the parallel expression of changed or perverted chemical processes of the somatic cells or of chemico-morphological changes in these cells, and this qualification of auto-intoxications does not clearly individualize them from the agency of other groups of poison.

The action of the chemical forces of the body are often most intimately associated with, or modified by, agencies other than those residing exclusively in the tissues themselves, both in health and disease, especially the latter.

In malaria the secondary toxic products induced in the blood by the action of the haematozoa would appear to be the predominating toxic agents rather than the substances which compose the bodies of the haematozoa.

In the gastro-intestinal tract the distinction between true auto-toxic substances and bacterial toxines is still more difficult. This is a common meeting ground for both sets of poisons in both health and disease. In the first place, the normal physiological role of bacteria in the process of digestion in the gut is apparently attended with a production of toxic agents. While these analytical digestive or putrefactive products in the gut are really bacterial poisons, they are habitual normal constituents of the body, and are not potential poisons unless absorbed by some error in the functions of the organs ordained to dispose of these latent poisons. I would, therefore, call these poisons, while latent, bacterial toxines, but when they become potential and gain access to the

circulation through errors in the process of absorption, they are to be termed auto-toxic substances. This is entirely consistent with the group of auto-intoxications due to the disturbance of the function of an organ with or without anatomical changes, and includes such gastro-intestinal auto-intoxications in that group.

Disturbances of Nutrition

The question is also pertinent if what is meant by the phrase "Disturbances of Nutrition" as a factor of disease is not made clearer by considering that many of such disturbances are in part at least forms of auto-intoxications.

"Disturbances of Nutrition" must imply modified or abnormal changes in the body cells and auto-poisons suggest themselves as agents which would very often cause such cellular chemical changes. As a tentative definition of auto-intoxications, I would say that the primary intoxications are due to the action of poisons newly formed or retained within the body by the purely somatic chemical agencies, and that secondary auto-intoxications are due to the action of poisons which result from the deprivation of the body of some indispensable chemical constituent. **Retained poisons include the transformation of latent into potential poisons in the gastro-intestinal tract or elsewhere in the body.**

When it is remembered that the whole animal body is composed of the most complex chemical compounds, which are incessantly undergoing new aggregations and segregations; when one recalls the complex chemical elaboration of the secretions, the digestive processes of the alimentary canal, the chemistry of general tissue metabolism and the chemical processes attending the elimination of waste products from the body he realizes vividly the abundant and constant opportunity which the living body affords under various disturbances for the occurrence of auto-intoxications. The dividing line between the harmless derivate of albumen and the severely poisonous tox-albumen is certainly very often most subtle. Apparently a very slight change in the molecular structure of a useful body proteid may cause a transformation to a very severe tox-albumen.

It is not strange in all of this complicated chemistry of the body, that the mechanism goes astray and either **abnormal poisonous chemical compounds are developed, or poisons normally elaborated in the body are not nullified because of derangement of the organs whose function appears to be largely if not wholly for that purpose (liver, thyroid gland), or, by some failure of the eliminative organs, that the retention within the body of normal physiological products of waste assumes such proportions as to become poisonous.**

The profound conviction already expressed that very many examples of Mental, and not a few instances of Nervous Disease Are Caused by the Action of Auto-Toxines on the Nervous System, whether of acute, sub-acute, intermittent, or chronic exhibition, is based upon my studies of the past 4 years of the cytologic changes on the nerve cells associated with poisons generically.

This belief then is founded principally on a morphological basis gained by the following course of studies.

At first the cytologic lesions induced in the ganglion cells by the exhibition of well known poisons of the extrinsic group such as arsenic, lead, mercury and alcohol, the action of which could be controlled and directly governed in animals, were carefully observed with the result of finding that these lesions were essentially the same for all of these poisons and were phases of an acute parenchymatous degeneration of the nervous system. Then similar studies of the minute changes in the internal structure of the nerve cell in **Bacterial Toxaemias such as Typhoid Fever and Diphtheria showed that the neural cellular lesions were essentially of the same type as those observed from the preceding set of poisons.** Moreover extensive cyto-pathological studies of the nerve cells in experimental and human rabies showed again practically the same set of cellular lesions identical with those due to extrinsic and bacterial poisons, namely, phases of an **acute parenchymatous degeneration of greater or less quantitative or topographical distribution in the nervous system, (Plate I).**

Plate I

Illustrations of Acute Parenchymatous Degeneration of the Nervous System

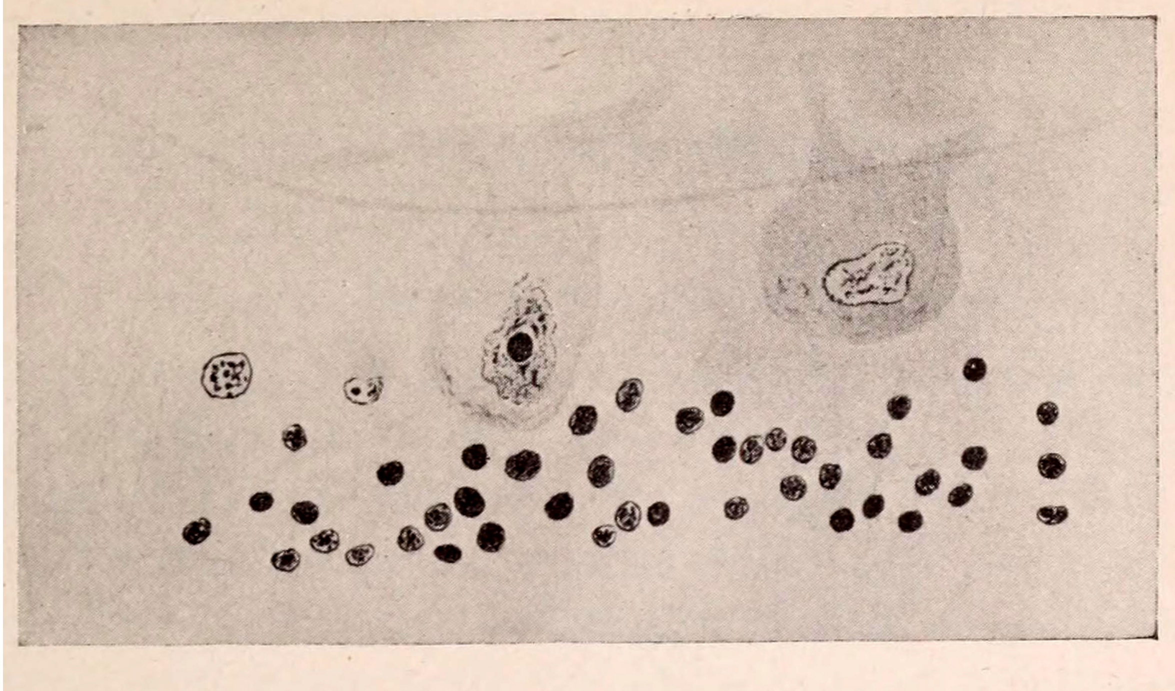


FIG. 1.

Figure 1

Acute degeneration of Purkinye's cells, from the cerebellum of a woman 27 years old, who died of acute alcoholic poisoning a few hours after a violent attack of delirium tremens.

The Purkinye cells have been counterstained with eosine after being stained with a lithium carbonate methylene blue solution, (Van Gieson).

The tissues were fixed in a corrosive sublimate solution and subsequently treated with Iodine. (Paraffine sections Reichert 1-18 Zeiss compensation occular No. 12).

There are changes in both the cytoplasm and nucleus of the cells.

The cytoplasm has lost nearly all of its chromophilic placques; it has a faint, pallid, shadowy outline, and is very difficult to see unless counterstaining is employed after the above modified Nissl solution.

The left hand cell in the drawing shows a more extensive phase of degeneration than the cell at the right.

In the former, the chromophilic placques have not only been dismembered into dust-like granules, but even these have disappeared with the exception of a few partly segregated placques at the neur-axal pole of the cell.

The right hand cell contains a few shrunken placques in the same position, and the rest of the cytoplasm is strewn over with the dustlike disintegrated granules of the chromophilic placques.

In the nucleus the karyotheca is distorted, shrunken and crenated; the karyolymph is more abundant and is radically changed in its chemical constitution.

The karyolymph stains deeply with the methylene blue and appears to be converted into a thick fluid which contains the dust-like segregated particles of the chromophilic placques in solution or suspension.

Thus the nucleus instead of being clear, as in the normal cell stained by Nissl's method, takes a deep diffuse stain and is in prominent contrast to the pale or almost colorless cell body.

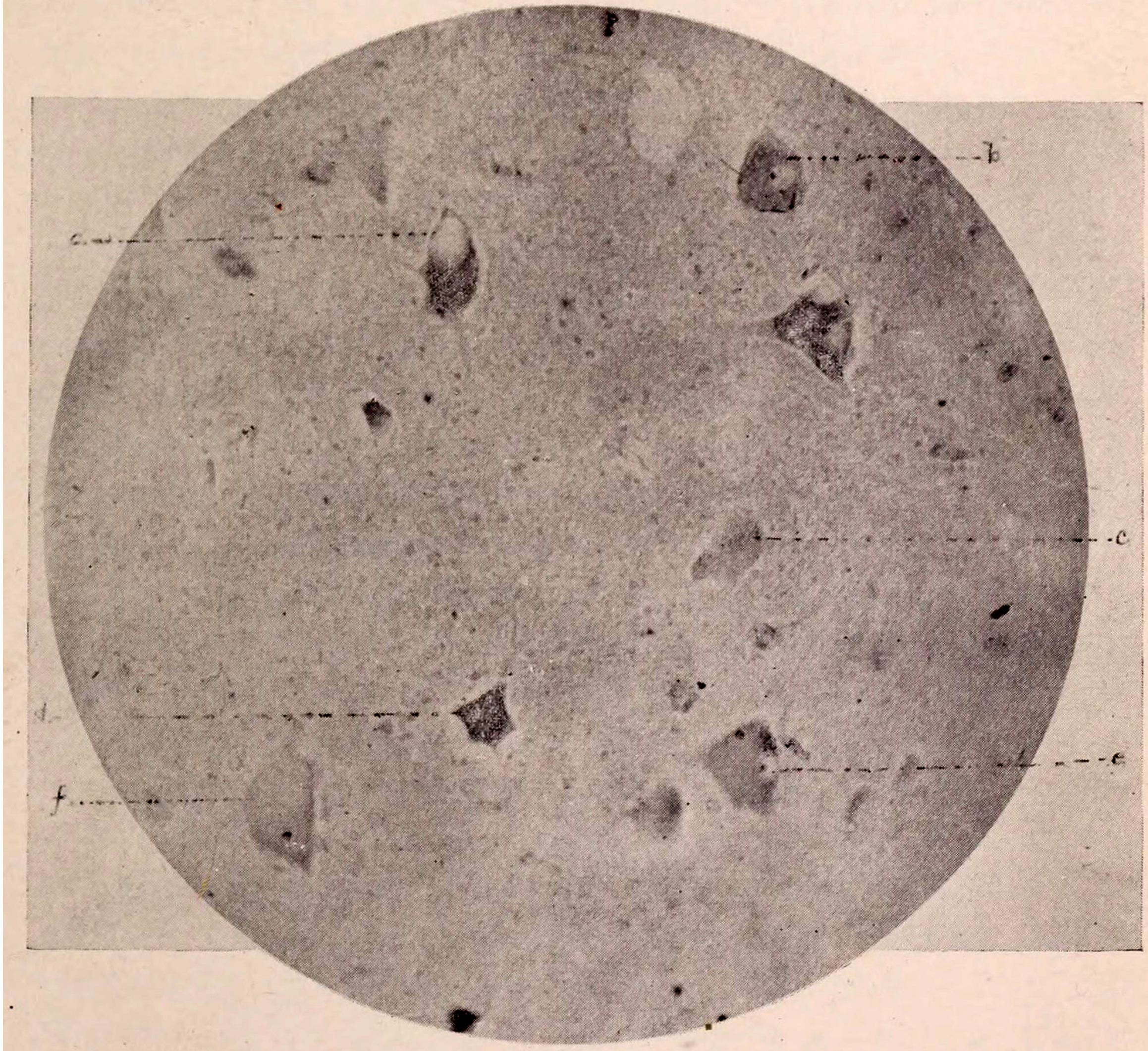


FIG. 2.

VAN GIESON, DEL.

PLATE I.

Figure 2

Acute parenchymatous degeneration in the spinal cord photographed from the anterior horn of the 5th lumbar segment.

The fixing and staining methods are the same as employed in the preceding section with the exception that absolute alcohol is used to kill the tissues instead of corrosive sublimate. The section was taken from a case of peripheral neuritis in which a defective history made it difficult to determine whether disease had its origin from an infection or from an extrinsic poison (alcohol).

There are but 2 normal cells in the whole field, d.d.

All of the others show various phases of the dissolution and disappearance of the chromophilic placques, as in the preceding section, so that the degenerated cells have the same faint, shadowy contrast to the normal cells, e.f.

In 1 or 2 of the cells the degeneration has gone onto an actual loss of substance, and in others there is more or less complete destruction of the cells, c.c.

While it is possible for the majority of these acutely degenerated cells e.f. under a cessation of the poison, and other favourable conditions to regain the normal structure and function, the cells with extensive vacuolation and destruction are damaged forever, and are the cause of the persistent dropped foot and hand in multiple neuritis.

While Figures 1 and 2 are taken from cases of alcoholic poisoning, the cellular changes are not at all to be considered characteristic, specific or peculiar to this form of poisoning.

The changes in these figures are the same as produced in the nervous system by:

1. **Acute Autotoxic Poisons;**
2. **Acute Bacterial Toxaemias;**
3. **Combinations of (1) and (2); and**
4. **Acute poisoning by extrinsic substances.**

These changes are the expression of a chemical reaction between the poison and the substances which compose the ganglion cell.

With the exception of very early and late stages of the degenerative changes in the ganglion cells, the changes in Figures 1 and 2 are quite the same as are to be found in the cortex, cerebellum or other segments of the nervous system when poisoned acutely or sub-acutely by phosphorus, arsenic, carbon monoxide, etc.:

Rabies,
Typhoid Fever, and its related diseases;
Insolation,
Eclampsia,
Malaria,
Pneumonia,
Influenza,
Exanthemata,
Puerperal Fever,
Scarlet Fever,
Measles,
Diphtheria,
Acute Rheumatism,
Pycemia,
Septiccemia, etc.

There are no specific anatomical sets of changes in the ganglion cells to correspond to the action of all of these different poisons, or even to correspond to the 4 great groups of poisons mentioned above.

The effects of all of these poisons on the ganglion cell are manifestations of the same thing — a great fundamental pathological process — acute degeneration with the alternative of regeneration or destruction of the structure and function of the nerve cell.

These morphological observations of the uniform character of the ganglion cell changes, produced by the action of poisons of such different natures, prompted the inference that the action of poisons of the extrinsic and bacterial group with certain restriction to be mentioned later, **all produced the same result in the nervous system as elsewhere in the body; namely, parenchymatous degeneration;** of an acute type corresponding with the acute or intense action of a poison, and of the chronic type of parenchymatous degeneration when associated with the gradual, intermittent, or persistent exhibition of a poison of a milder degree of intensity.

It seemed therefore while different phases of degeneration of the nerve cells attended the action of several members of the different groups of poisons in the above mentioned observations, that these cells changes were not evidences of individual or distinct pathological process but manifestations of the same thing, — a single, great, broad fundamental pathological process — acute parenchymatous degeneration of the nervous system.

It appeared then from these observations that two great groups of poisons, the bacterial and extrinsic classes, in the initial stages of their action on the nervous system were manifested by the same fundamental pathological process of acute degeneration, which was in harmony with the fact that this same pathological process is elicited by the action of these same poisons in other organs in the body as well as the nervous system.

This led not only to acceptance of the inference that acute parenchymatous degeneration is the expression of the action of poisons in the nervous system as well as in the body universally but also that the converse of this proposition — with certain qualifications, — is also true.

These qualifications are that other factors in the production of disease than toxic agents must be taken into consideration and excepted in stating the converse of the proposition that poisons generically induce acute (or chronic) parenchymatous degeneration of the nervous system.

There are besides toxic agents certain traumatic and mechanical factors in the production of acute or chronic parenchymatous degeneration of the nervous system. If there be certain mechanical disturbances in the nutrient supply of the ganglion cell or certain mechanical interferences in its metabolism, parenchymatous degeneration results just as well as in the action of toxic substances. For instance, if the blood supply be cut off from a mass of ganglion cells they undergo changes identical with those in the process of acute parenchymatous degeneration.

Hence, excluding certain traumatic or purely mechanical or nutritive factors in the induction of disease, I am led to accept the belief that acute (or chronic) parenchymatous degeneration of the nervous system as elsewhere in diseases of the body at large, postulates the action of a poison and also the belief in the value of a posteriori reasoning from the effect of acute or chronic parenchymatous degeneration of the nervous system to the cause residing in a poison or poisons of one form or another.

Given, therefore, acute (or chronic) parenchymatous degeneration of the nervous system, as shown in Plates I and II, the action of a poison is indicated.

But since all poisons seem to act alike on the cell, the poison can not he identified, and we are justified in saying that this morphological evidence of degeneration alone points to the action of a poison only in the generic sense.

Thus in any acute neural disease, or in the involvement of the nervous system in an acute general illness, even of unknown causation or in the chronic affection of the nervous system left behind months or years after these two conditions, when acute parenchymatous degeneration or its results are found, the imprint of this great extensive pathological process on the ganglion cell, indicates the action of toxic forces as plainly, as the marks on the rocks show the glacial action.

Parenchymatous degeneration of the nervous system, then, especially the acute variety, although the distinction between the acute and chronic forms in relation to toxic agents corresponds only to differences in the manner and duration of exhibition of the poisons, may be considered as a reliable clue to the action of a poison. This clue is also of value, even if the results of this cellular degeneration of the nervous system are observed months or years after the acute primary poisoning of the nervous system when the dependence of a chronic mental disease on this antecedent condition has been overlooked.

While little or nothing may be known about the nature or source of subtle and seemingly intangible pathogenic poisons, beyond suspicions of their existence from the clinical history, nevertheless existence in the body of these poisons may be postulated and their causal relation to the neural clinical manifestations may be determined by the morphological changes of parenchymatous degeneration recorded in the nerve cell by their toxic action.

Furthermore, in other mental or nervous diseases, wherein the source or nature of a poison is so artfully concealed from clinical or other scrutiny that we have not as yet arrived at even definite suspicions of a toxic agency, we shall, nevertheless, be enabled through this morphological line of evidence, to demonstrate the presence of a poison or poisons as the causal factor of the disease, and in a great measure explain the reason of the clinical manifestations.

These neurocytological investigations were then extended from the field of extrinsic and bacterial poisons to Uraemia, Sun-stroke and experimental Thyropravia. This latter disease manifests such a close clinical resemblance to a severe and fatal form of tetany, that an understanding of the former is most valuable in interpreting, in a general way, the modus operandi of the poison in the latter disease.

From the above outlined studies leading to the interpretation of acute parenchymatous degeneration of the nervous system as an index to the action of poisons, upon discovering this acute parenchymatous degeneration in one or another of its phases in the nervous system in these 3 diseases, I knew that such nerve cell changes (like those in Plate I) were the handiwork of some unknown poison or poisons.

Having established in this way that the existence of poisons was responsible for these 3 diseases, the next step was to ascertain to what great group these unknown poisons pertained.

As indicated previously in the studies of extrinsic and bacterial poison, the changes in the ganglion cells are not particularized or distinct for the different poisons or groups of poisons, but are fundamentally the same in expressing mere phases of a single great pathological process.

Thus the identification of the class of the unknown poisons in these 3 diseases could not be determined from the histological changes in the nerve cells alone.

But by the process of exclusion one after another of the several great groups of poisons as enumerated in the beginning of this section could be eliminated until the unknown poisons indicated by the neural parenchymatous degeneration become narrowed down to a particular class — auto-poisons.

This process of elimination can be pursued with considerable certainty in grouping the unknown poison indicated by the structural traces of its action on the ganglion cells.

Partly by the character of the onset of the symptoms, partly by the course, duration and termination of the clinical history, and partly by the disclosures of the autopsy examination together with the microscopical examination of the organs in general, poisons of one or another particular class may be excluded with considerable certainty.

Extrinsic poisons are generally easily excluded by the character of the clinical history. Bacterial poisons are excluded in a general way by the absence of the bacteria themselves, and the structural reactions of the body against them.

Protozoal poisons and poisons due to pathogenic fungi, in the present incomplete state of our knowledge concerning them, are much more difficult to exclude.

Thus, in these 3 diseases, Thyropravia, Sun-stroke and Uraemia, the unknown poisons indicated by the acute parenchymatous degeneration of the nervous system could by this process of elimination be reduced to the auto-toxic class.

And, I do not hesitate to believe, reasoning in this way, that I have established a method of taking evidence from a purely morphological standpoint, which, when conjoined with the process of elimination of other groups of poisons, is very trustworthy, in investigating **The Autotoxic Basis of Mental and Nervous Diseases in general.** Furthermore, reasoning by analogy from these 3 types of auto-intoxications of the nervous system more or less well-proven from the purely morphological standpoint in conjunction with the process of elimination of other groups of poisons, **I am inclined to extend the auto-toxic basis of nervous and mental diseases quite widely indeed, especially to some of the forms of melancholia, epilepsy, mania and other varieties of mental and nervous diseases. Finally I would remark that the discovery of acute parenchymatous degeneration in the nervous system in these 3 types of auto-intoxications, namely, Thyropravia, Sun-stroke and Uraemia, adds still another great group of poisons to the list of extrinsic and bacterial toxic agents which all manifest their action on the nervous system, as elsewhere in the body, by this same pathological process.**

Therefore this finding of acute degeneration of the nerve cells due to the action of the acute Auto-Intoxicants, permits me to believe still more freely that not only Extrinsic Bacterial and Auto-Toxic Poisons induce parenchymatous degeneration of the nervous system, but that the action of poisons in general is attended with this result, and that, broadly speaking, with the exceptions noted before, the converse of this proposition is also true.

Perhaps the best understood of the Auto-Intoxications is the group due to the retention of substances which ought, in the normal condition, to be excreted.

In this group of Auto-Intoxications the study of the toxicity of the urine is exceedingly interesting and apparently reliable as an index or measure of the auto-toxic substances retained within the body.

It has been estimated by Bouchard that the normal individual secretes waste products in 52 hours in the urine alone which, if retained in the body, would be a sufficient amount to prove fatal. This author, studying the toxic effects on animals of urine from the normal individual, has established a uro-toxic coefficient.

The urotoxic coefficient means that a given quantity of urine from the normal individual injected in a test animal (rabbit) of a given weight produces a fairly uniformly definite result. The animal dies within a certain time with characteristic symptoms indicating involvement of the nervous system.

If a smaller amount of urine produces this result in a test animal the urine is said to be hypertoxic, and, on the other hand, if a larger amount of urine is necessary to produce the same result, it is hypotoxic.

The hypotoxic condition of the urine may be taken to indicate a retention of the physiological products of metabolism, and during the onset of the symptoms accompanying an Auto-Intoxication of this class it appears to be demonstrable in animals that the toxic substances which are normally secreted by the urine are deficient in amount. If, on the other hand, during the cessation or after the acute attack of the auto-intoxication the urine when injected in animals shows a return of the excess of toxic substances retained during the attack, it is said to be hypertoxic to the test animal. This means that there is an excess over the normal toxicity of the urine. Finally, while a hypertoxic condition of the urine may be taken to indicate the return of retained physiological waste products in the urine, it may also indicate the presence of newly or abnormally formed poisons within the body which have been absorbed into the circulation and have been excreted in the renal circulation.

Thus while hypo-toxicity of the urine before an attack of auto-intoxication, may be taken to indicate retention of normal physiological waste products within the body, hypertoxicity of the urine during or after an auto-toxic attack may indicate the presence of auto-toxic poisons of at least 2 sources:

1. The hypertoxic condition of the urine, as an antithesis of the hypotoxic condition, may indicate the return of withheld physiological waste products.

2. The hypertoxic state of the urine has no relation to an antecedent hypotoxic state, but indicates the presence of poisons of another class than the "retention group," viz.: poisons which have been newly formed within the body, or poisons whose development habitually attends chemical process in the body, but which have not been properly transformed into innocuous compounds by certain organs for that purpose and have gained access to the general circulation.

For example: in the intermediary metabolism of the tissues in general some foreign toxic substance may arise and appearing in the urine, excreted from the circulation, gives a condition of hyper-uro-toxicity: or if in the development of toxic substances which habitually and normally attends gastro-intestinal digestion, these toxic agents are not nullified or transformed into useful body nutrient substances by reason of any derangement in the process of absorption, such toxic agents may in the same way appear in the urine and confer a hypertoxic quality.

Classification of the Auto-Intoxications

Albu, of Berlin in 1894, suggests the following general classification of auto-intoxications:

1. Auto-intoxications from the suppression or disturbance of the functions of an organ.

These are due to diseases of the glands with or without anatomical changes, although **the most frequent anatomical lesions in the glands accompanying these Auto-Intoxications are atrophic changes.**

The auto-intoxications of the thyroid gland belong in this list, such as myxoedema, and cachexia strumipriva.

Diabetes, acute yellow atrophy of the liver, and Addison's disease, due most undoubtedly to lesions respectively of the pancreas, the liver and the suprarenal capsules, are also included here. **This list should also include the diseases which are due to the suppression of the function of those organs, such as the liver, which destroy such absorbed noxious material from the gastro-intestinal tract or other poisonous metabolic products as are constantly formed within the body.**

2. Auto-Intoxications which occur from anomalies in general metabolism without any definite localization, — In this class of auto-intoxications the diseases which depend upon the absorption in the circulation of the intermediary products of metabolism or the products of retrogressive metamorphosis belong, for instance, gout and oxaluria.

3. Auto-intoxications which are caused by the retention of the physiological products of metabolism in the different organs. — In this category belong the severe form of poisoning due to extensive destruction of the skin by burning, carbonic acid poisoning by inhibited or deficient respiration, uraemia and eclampsia gravidarum.

4. Autointoxications due to the over-production of physiological and pathological products of the organism, such as hydrothionaemie, ammoniaemia, acetonuria, diaceturia, cystinuria, etc., also diabetic coma, coma carcinomatosum, etc., and Basedow's disease.

Midway between groups 3 and 4, and partaking in a measure of each, are placed the great majority of auto-intoxications arising from the gastro-intestinal tract, associated with acute or chronic digestive disturbances, with or without pathological changes in the gastro-intestinal tract.

Depending upon the regional distribution, or localization of the source of the autointoxication:

1. Autointoxications from the skin. — For example, the toxic symptoms due to extensive burning of the skin.

2. Autointoxications from the lungs; carbonic acid poisoning from deficient lung capacity or respiration.

3. Autointoxications from the kidneys; uraemia and eclampsia.

4. Autointoxications from the suprarenal capsules; Addison's disease.

5. Autointoxications from the gastrointestinal tract. — The auto-intoxications from this source comprise a very large group, and their relations to the production of nervous and, probably, mental symptoms is intimate and pronounced; for instance, Tetany, some forms of Epilepsy, periodic Paralysis, Eclampsia Infantum, Thomsen's disease, and according to some French observers, Melancholia and a class of Psychoses which has been termed by them " Visceral Psychoses."

6. Auto-Intoxications in the liver; acute yellow atrophy, icterus gravis, cholaemia.

7. Auto-intoxications from the pancreas; diabetes mellitus.

8. Auto-intoxications from the thyroid gland; myxoedema, cachexia strumipriva, and probably Basedow's disease.

A classification on the basis of physiological chemistry is indicated by Kraus and Honigman as follows:

a. Autointoxication of Intermediary Metabolism
b. Acid Auto-Intoxications
c. Human diseases, in which Acid Auto-Intoxications are due to the accumulation of Benzyl Oxy-Butyric Acid, and its compounds
d. The Uric Acid diathesis
e. Alkaptonuria
f. The Auto-Intoxications from the Internal Secretions
g. Cachexia thyroidinea
h. Uraemia

These various types of Auto-Intoxications must be Very Important Factors in the Production of Nervous and Mental Diseases, for the nervous system is more sensitive, apparently, to this group of poisons than any other tissue or organ in the body.

The prevailing symptoms of most of the Auto-Intoxications are most decidedly Due to Poisoning of the Nervous System; for instance in:

Myxoedema, Thyropravia, Basedow's Disease, Insolation, Tetany, some examples of Epilepsy, etc...

In many cases of uraemia, the predominant symptoms are manifestations of poisoning of the nervous system.

In others of the more obscure Auto-Intoxications the nervous symptoms are the only apparent manifestations of the Auto-Intoxication.

In fact, the only clue to indicate the presence of some of the more obscure auto-intoxications, is exclusive symptoms of the nervous system; for instance, **the only obtrusive indications of some of the Intestinal Auto-Intoxications are:**

1. **Migraine**
2. **Dizziness**
3. **Syncope**
4. **Delirium**
5. **Coma**
6. **Somnolence**
7. **Sopor**
8. **Tonic and Clonic spasms**
9. **Epileptic and Epileptoid attacks**
10. **Many cases of Epilepsy**
11. **Melancholia**
12. **Mania**
13. **Periodical Forms of Insanity**
14. **Other Varieties of Mental Disease**

The Morphological Effects of these Poisons on the Ganglion Cell

The reason for this susceptibility of the nervous system to auto-toxic poisons is patent. The high organization of the ganglion cell, the most complex cell in the human body, — a cell in which the internal structure is most intricate and delicate, — must naturally, other things being equal, undergo changes from contact with a poison and express parallel physiological disturbances more readily than the more lowly organized cells which compose the ordinary viscera, or the static cells of the general tissues of the body.

There are a few examples of Auto-Intoxication in which there is an unequivocal demonstration of the involvement of the nervous system by an Auto-Poison.

In experimental Thyropravia in dogs **the universal acute degeneration of the destructive type which involves the whole cortex of the brain, corresponds very well with the fatal manifestations of irritation and destruction of portions of the Nervous System.**

These changes in the ganglion cell can have no other explanation than in the action of an auto-poison circulating within the body which comes in contact with the ganglion cell.

In certain cases of uraemia I have been able to demonstrate acute degeneration of the cortical cells, but of a much less extensive and severe type than in thyropravia.

In insolation, I have also found an acute degeneration of the nervous system of variable degrees of severity, which must be due to an auto-toxic poison.

While the nature of the poison in this case is entirely obscure, there is absolutely no doubt about the way it acts upon the nervous system. (Plate I.)

The poison produces an acute degeneration of the cortical cells which, in some instances, goes on to destruction of the cell.

I cherish the expectation that in Myxoedema (Thyropravia), in the late neural manifestations of Addison's disease, and Diabetes, in Tetany, Basedow's disease, the Epilepsies, in many of the Melancholias, Manias, periodical Insanities, and very many other forms of mental and nervous diseases that similar phases or results of neural parenchymatous degeneration will be found to furnish a definite basis to explain the parallel clinical manifestation.

The gastrointestinal tract, including the liver, would seem to be a most important source of Neural Autointoxications.

Here poisons are habitually and normally formed, and the only safeguard of the body against them (unless destroyed by the bacteria of the gut) is their transformation into innocuous compounds or useful body nutrients in the process of intestinal absorption or in the hepatic circulation. How readily, then, may these constantly present latent poisons of the gut be transformed into potential poisons through some hidden intangible error in the process of absorption or by some more palpable actual lesion of the organs concerned in this process.

It is from this source that we can best understand the insidious leaking into the circulation of poisons which are probably not generally acutely and intensely virulent but are more often of the slow, chronic, persistent, and exacerbating type so dangerous to the integrity of the cortical neurons of the brain by their prolonged or repeated action.

But it is the exception to find symptoms indicating the development of such poisons.

Only the effects of the poison are witnessed at a distant point of the body as a rule: in a slow, gradual, persistent or intermittent poisoning of the nervous system, especially in the brain cortex, attended with the parallel mental or nervous symptoms.

It is not remarkable with such an intangible relation of cause and effect, that many forms of mental disease have seemed such utter mysteries and barriers to morphological chemical investigation.

At present, the application of the methods and **knowledge of modern cytology to the nervous system furnishes the means of demonstrating these effects — we may see the handiwork of a poison in the brain even if its nature be unknown.**

This alone is a great step forward in the progress of the pathogenesis of mental diseases.

One of the strongest arguments in favour of the causation of many of the sub-acute, periodical, or chronic psychoses by the Gastro-Intestinal Auto-poisons is the persistent or confirmedly intermittent character which may be justly imputed to these poisons from the very nature of their development.

A poison of this nature is admirably suited to explain the etiology of some of the most obscure forms of mental disease, such as certain of the varieties of Melancholia, Mania, the periodical or alternating forms of these affections, Neurasthenia, the graver hysterical and cataleptic conditions, etc., associated with these psychoses.

The acute, sub-acute or chronic character of some, if not many, of the melancholias, manias, and allied psychoses, **corresponds to variations in the intensity and duration of exhibition of the auto-poisons.**

These fluctuations in intensity and duration of the action of the poison on the cortical nerve cells from the peculiarly variable factors governing their development can be perhaps more graphically realized in the gastro-intestinal than in any other class of auto-poisons.

Intensity and duration of exhibition of poisons in general as well as the Auto-Poisons are the great factors which control the character and termination of the Toxic Mental and Nervous Diseases. Upon these two factors, especially the latter, depends the issue of recovery or improvement or a chronic incurable disease dependent upon permanent damage to the nervous system.

While intensity and duration of exhibition are variable functions of the poison itself, both of these factors, especially the latter, are greatly modified by the body forces which combat poisons.

For instance, **a given (auto) poison will operate longer in an individual with impaired Emunctories than in the normal subject,** or act more intensely in a man whose nerve cells have been previously damaged by alcoholism or other poisons.

Studies of general **toxic changes in the nerve cells**, and also in 3 examples of **Neural Auto-Intoxications** (Insolation, Thyropravia and Uraemia) with especial reference to the modifications of the toxic cell changes induced by mutations in the intensity and duration of the action of the poison confirm the following statements.

The severity of Toxic Degeneration of the nerve cell, is in direct ratio to the duration of the action of the auto-poison.

While the poison may be intense and virulent, if it acts for a brief period only on the nerve cell, the resultant degenerative changes may be recovered from upon the cessation of the poison.

There may be profound internal changes in the cytological elements, (Plate I, Fig. 1) but, nevertheless, the cell may be built up again and recover both structure and function.

But if the action of the poison continues beyond a certain period the degenerative changes eventuate in destruction of the cell (Section V, Plate I, Fig. 2).

There is in this case either death of the individual or, if he recovers, the nerve cells (in whatever portion of the nervous system acted upon) are damaged permanently, and their loss is absolutely irreparable.

These 3 great groupings of auto-poisons according to the variable factors of intensity and duration of action correspond to certain phases of degeneration of the nerve cells.

This in turn determines the prognosis, course and termination of not a few examples of acute, subacute and chronic types of mental and nervous diseases.

The whole course, duration, termination and prognosis of toxic mental and nervous diseases, whether due to auto-or other poisons, depends upon the course or termination of parenchymatous degeneration controlled by the duration and intensity factors of the poisons.

I would therefore suggest the terms Cytolysis, Cytoclasis and Cytothesis to particularize certain stages and results of parenchymatous degeneration of the nervous system which govern the prognosis and general character of the toxic neural diseases.

The term Cytolysis (from a hollow, a vessel, hence a cell, and the act of loosing or resolving — hence cell resolution) signifies the successive series of cell degeneration up to, but not beyond, the point of destruction of the cell.

Cytolysis comprises the phases of degeneration in parenchyma cells which may be recovered from; it signifies resolution, but not destruction of the cell, and may be succeeded either by restoration or destruction of the cell. (Plate I)

The term Cytoclasis (a cell, and the act of breaking to pieces — hence cell destruction) comprises the progressive phases of parenchymatous degeneration which involve destruction of the cell. (Pl. I, Fig. 2)

Cytoclasis signifies the process of necrosis of the cell.

In the neurons cytoclasis is permanent and absolutely irreparable. It is a process that succeeds cytolysis.

The term Cytothesis (the act of binding or tying together — hence cell restoration or reconstruction) comprises the steps of restitution of the cells, after the initial and non-destructive stages of parenchymatous degeneration.

The cytothetic process is the reverse of the cytolytic.

In the chronic phase of parenchymatous degeneration of the nervous system, as in other parenchyma cells throughout the body, the stages of degeneration occupy a longer time in their development.

The process goes on slowly, gradually, and continuously with exacerbations in **the action of a poison insidious in its mildness but fatally dangerous to the integrity of the nerve cells acted upon.**

What is called peripheral neuritis is a most beautiful example of subacute toxic parenchymatous degeneration of some of the neurons of the spinal cord.

There are, then, 3 great periods in the time factor of the exhibition of poisons to the nervous system, the:

1. **Acute**
2. **Subacute**
3. **Chronic periods**

To sum up the matter briefly and in a general way, **the acute, subacute or chronic development of the toxic neural diseases is very largely the expression of corresponding conditions of acute, subacute or chronic phases of neural parenchymatous degeneration caused and controlled by mutations of the time factor in the exhibition of poisons.**

Hence the acute, subacute and chronic conditions of the toxic parenchymatous degeneration, and the acute, subacute and chronic development of the associated neural diseases merge imperceptibly into each other.

For example, cytolysis of the cortical neurons underlying the symptoms of the acute delirium in sun-stroke, typhoid fever or in the acute infectious diseases is generally succeeded by complete cytothesis of these neurons upon the cessation of the poison. Recovery of the neurons is also possible in the subacute poisonings of the nervous system. But it is more tardy, irregular and more liable to be incomplete than in the acute toxic condition, for the border line between cytolysis and cytoclasis is more liable to be crossed.

In a subacute poisoning of the nervous system there may be nearly complete recovery, but we can never predict to what extent cytoclasis may have been induced by the more protracted exhibition of the poison.

Poisons will act on the nervous system when we find but little or no trace of their action elsewhere in the body.

The clinical phenomena of one Nervous Disease, namely, Tetany, which often seems definitely due to alimentary auto-poisons, are in accord with the general action of poisons on the nervous system.

The establishment of the Gastro-Intestinal Auto-Toxic origin of many examples of a single individual disease of the nervous system, as in Tetany, furnishes most valuable aid in ascertaining the connection of these poisons with other forms of neural disease.

I —The Acute Gastro-Intestinal Auto-Poisons

If Epilepsy be due to the action of Gastro-Intestinal Autopoison — which, I am inclined to believe, is the case in many but not in all instances of the disease — it is a most beautiful example of the persistent intermittent action of an evanescent poison upon the cortical neurons. Whether the action of the poison or poisons of Epilepsy be associated with chemical or structural changes in the motor cortical neurons, the poison is so evanescent that restoration of the neurons is prompt and perfect. **Thus in idiopathic Epilepsy, the attacks due to the action of an evanescent poison circulating in the blood may be prolonged for months and even years, without apparently producing cytoclasis of the motor cortical neurons. This disease is a fine example of the definite relationship of cytothesis of the nerve cell to the duration of the poison. Epilepsy heads the list of Toxic Diseases in the brevity of the exhibition of the poisons. The action of the poison or poisons of Epilepsy on the nervous system illustrates the first member of the great progressive serial scale of the time factor of poisons in toxic diseases.**

This varies between an evanescent poison at the beginning of the series and an indefinitely prolonged or constant toxic exhibition at the final end of the scale. Hence, the disease is one of the finest examples of rapid and perfect cytothesis of the cortical neurons, and this apparently continues after each attack for a long time — for months and even years. **These opinions of the Toxic origin of Epilepsy** are not mere conjectures, nor are they prompted from a tendency to make the disease fit in with too generalized an application of the toxic basis of neural disease, but **are formed from the results of a diligent search of some years for the structural changes in the brain in 10 or 12 cases of the idiopathic form of the disease. I can find no explanation of the results of the microscopical examination of the brain in these cases, except by ascribing these results to the transient action of an intermittent poison, which gains access somewhere to the general circulation. The subject of the toxic basis of neural diseases is so vast** that throughout the sections of the second part of this discourse, the action of toxic substances for the sake of simplicity, is limited as far as possible to the parenchyma or neurons of the nervous system.

The Action of Toxic Substances on the other component element of the Nervous System — the Stroma or Neuroglia — is manifested in an entirely different manner than in the Parenchyma, and will be discussed later in Part IV.

Having found an increase or overgrowth of neuroglia in the sub-cortical zones in the motor regions in the examination of several of these idiopathic cases, I am unable to interpret this except by the action of a poison for this reason.

It appears that the stroma as well as the parenchyma of the brain may indicate the action of a poison although in a different way.

This increase of neuroglia in the sub-cortical zones in Epilepsy, I do not regard as a primary cause of the symptoms, but as a secondary effect of a poison.

I have reasons, therefore, from the morphological line of investigation, which, when joined with the peculiar clinical behaviour of the disease, make the acceptance of its toxic basis almost compulsory.

There seems to be no other way of explaining the symptoms of the disease or the associated changes in the brain.

Furthermore, the poison must be of the auto-toxic category.

For the development of these poisons is perfectly compatible with the evanescent character of the epileptic poison, while none of the members of the other great groups of poisons is endowed with such a peculiar transitory characteristic.

Finally, I am unable to reject the suspicion that **the particular class of auto-poisons perhaps best adapted to confer the evanescent property of the epileptic poison is the gastrointestinal group.**

This seems so because of the facility with which latent poisons in this region may momentarily become potential, and on account of **the close analogy which Epilepsy bears to Tetany, a disease frequently caused by Gastro-Intestinal Auto-Intoxication.** It will be recalled that not infrequently **Antiseptic Therapeusis of the Alimentary Tract modifies the occurrence of the Epileptic Attacks to a considerable extent.** Yet, **other varieties of Auto-Poisons may be responsible for Epilepsy just as well as the Gastro-Intestinal class.**

The Auto-Poisons of intermediary metabolism, of which we are almost entirely ignorant, **may contain a member of this evanescent character.**

Or a poison from some other equally unknown source in the body may accumulate beyond the nullifying capacity of some **one of the poison destroying organs (like the liver); then the Poison suddenly gains access to the Blood; and the Epileptic Fit may Occur. I have, therefore, classified the disease among the Gastro-Intestinal Auto-Intoxications. This has been done merely because we do understand something about the development of this class of auto-poisons, and on account of the resemblance of Epilepsy to tetany, the one clearly understood type of Gastro-Intestinal Auto-Intoxication.**

b. — **If the Gastro-Intestinal Poison be again of considerable intensity but of somewhat longer duration than in Epilepsy, quite similar manifestations occur in the Toxic Action upon the Motor Cortex.**

The duration of such a poison is transient rather than evanescent, and elicits the symptoms of the typical cases of Tetany. Here, again, like the case of Epilepsy, whatever measure of slight cytolysis of the motor neurons of the cortex is induced by the poison, is promptly effaced by cytothesis after the cessation of the poison. The poison producing Tetany, however, is not so uniform in the element of the time factor as that of Epilepsy. The poison of Tetany seems subject to much variation in this respect, for the attacks show many different grades of severity and duration. In the severer and more protracted attacks and especially in the fatal forms of the disease, cytolysis should be quite pronounced if the brain were examined shortly after the attack.

In the fatal form there is undoubtedly cytoclasis of the motor cells of the motor cortex and probably severe degeneration of cells in other cortical regions.

In these fatal cases, while the poison at first has a selective action on the motor cortex as in the mild cases, as the toxic agent grows more intense and protracted in its action, probably the whole cortex is involved.

c. — If the Gastro-Intestinal Poison be again of transient duration but of a very mild intensity, its action on the nervous system might be taken to explain certain attacks of: Migraine, Sopor, Vertigo, Eclampsia of children, Mental Inertia, Depression, Hebetude, &c., or other minor functional affections of the brain which are so often overtly associated with gastro-intestinal disturbances.

The connection between these minor so-called functional derangements of the nervous system occurring in the form of attacks is frequently so overtly associated with tangible derangements of the alimentary tract that it has always been more or less well recognized popularly.

Celsus, was well aware of the relation of cause and effect in some of these instances in saying:

"Almost Every Convulsion is Caused by the Abdomen."

The explanation of this relationship between even these minor or transient nervous manifestations and the less unobtrusive gastro-intestinal disorders must be in the leaking into, or uncombated Entrance Into, the Circulation of some latent Toxic Substance from the Alimentary Tract which Poisons the Nervous System.

It seems only a question of degree in the severity or duration of the alimentary poison, and the resultant neural degeneration which establishes the indefinite line of distinction between these minor transitory so-called functional manifestations of the nervous system, and some cases which show the graver symptoms of actual psychoses.

Independent of actual lesions of the gastro-intestinal tract in children, the mere education of the alimentary system to fulfil its functions, is attended with experiments and errors.

This is not infrequently accomplished in the developing infant without emphatic manifestations of transient poisoning of the nervous system evidenced most frequently by spasms or convulsions. It is hardly to be expected in such instances that cytolysis occurs to any obvious or measurable extent. Or if the action of a poison of such a nature should produce initial degrees of cytolysis, this is promptly effaced by cytothesis upon the cessation of the poison.

It is very likely that the action of such poisons on the ganglion cells of the cortex results in a chemical change without parallel structural alterations.

I believe that the symptoms of many of these minor so-called functional derangements of the brain or other portions of the nervous system, are the expressions of the action of auto-poisons, particularly those of the gastrointestinal tract.

This can be the more readily realized perhaps when it is recalled that the blunting and soporific effects of such drugs as the bromides on the nervous system are apparently induced by cytolysis of the ganglion cells.

When this drug is given in large and continuous doses to rabbits it produces decided cytolysis of the whole central nervous system, as shown by Pandi.

The induction of sleep more particularly after fatigue is apparently a phenomenon of Auto-Intoxication for Mosso and Arbelous have demonstrated the toxicity of the blood in fatigued animals.

At this point it is necessary to allude very briefly to the matter of the selective action of poisons upon different regions of the nervous system.

In a general way the selective action of different departments or regions of the nervous system by poisons determines the distinction between purely nervous diseases and mental diseases.

In the two preceding examples of Epilepsy and Tetany we had under consideration poisons which exhibited a selective action upon the motor neurons, especially those of the brain.

Hence the action of these poisons elicits in the typical cases a particularized, characteristic and definite group of symptoms due to the excitation of the motor zones of the brain.

In the succeeding varieties of the exhibition of gastrointestinal auto-poisons this selective or localized action of the poison on the nervous system is reduced to a minimum.

There is a general action of the poison to a greater or less extent on the whole cortex. If there be any selective action on the cortex in the beginning of the action of these poisons, such selective action very soon merges into a more or less general involvement of the whole cortex.

d. — **In the case of a gastro-intestinal poison of considerable intensity, of brief duration but of general action on the brain cortex, the conditions are present for the development of mental symptoms of the acute type. The generalized action of such a poison on the cortex according to various phases of intensity and rapidity of development might produce acute delirium, or a form of acute mania or melancholia of rapid development. These sets of mental manifestations are expressions of the toxic cytolyses of the cortical neurons.**

Why cytolysis of the brain cells should manifest activity of the cortex in one case and cortical inertia in another case is difficult to fully explain.

In the exhibition of the acute poisons of generalized action on the cortex we observe excitation of the cortical neurons in many instances.

But in other examples the symptoms are indicative of an abrogation of the functions of these neurons.

Leaving, for a moment, these acute gastro-intestinal auto-poisons which act generally on the cortex, let us consider the action of better known poisons of similar properties in the acute bacterial diseases.

In the poisoning of the brain in the acute infectious diseases, we find expressions of excitation of the cortical neurons in some cases and a depression of their functions in other cases.

The excitation of the neurons corresponds to the delirium preponderating in some of these cases, and the depression or annulment of the functions of these neurons corresponds to stupor, confusion and coma in other cases.

The delirium in these Bacterial Toxaemias of the brain implies a hyperkinesis of the cortical neurons, and the stupor, confusion and degrees of coma, a hypokinesis of these same neurons.

These terms of hyper- and hypokinesis of the neurons are merely words of convenience to signify excitation and depression of the functions of the neurons.

The bacterial poisons express their toxic action on the brain in acute delirium or in analogues and degrees of coma.

This is due to an embodiment of acute parenchymatous degeneration of the brain cortex with its attendant phases of:

- **Cytolysis**
- **Cytoclasis**
- **Cytothesis**

I believe this to be the case, in the first place, by finding acute parenchymatous degeneration in the cortex in a case of typhoid fever.

Secondly, **I find that this degeneration of the cortical neurons in typhoid fever is not essentially different from the changes in the cortical nerve cells associated with the acute delirium of sun-stroke, the delirium or coma of acute alcoholism or the coma of uraemia.**

So the explanation of these mental symptoms of poisoning of the brain in excitation or depression of its functions whether the poison be alcohol, the toxines of typhoid fever, or the poison of sun-stroke, resolves itself again in this matter of cytolysis, cytoclasis, and cytothesis of the cortical neurons.

But how does this same process of cytolysis produce such different results as hyperkinesis, hypokinesis and akinesis of the neurons (loss of action or function of the neurons).

This is a very complicated question, but I believe that the answer, in part, at least, may be stated as follows: The different expressions of the disturbance of functions of the neurons such as hyperkinesis, hypokinesis and akinesis are caused by differences in the mode of development of cytolysis.

Apparently, rapidity of development in some instances is a factor of considerable importance in governing the character of the development of cytolysis of the neurons.

It seems that when the stages of cytolysis occur progressively and serially within a comparatively brief time in a given nerve cell, there is an acute excitation of that cell. But if a part or all of these serial steps of cytolysis occur collectively in a given nerve cell there should be corresponding expressions of hypokinesis or akinesis of that cell.

I believe this to be the case, first, from studies of the anterior horn cells of the spinal cord in a case of brief poisoning with well marked clinical manifestations of hyperkinesis of these cells.

These cells showed beginning or only moderately advanced and progressive stages of cytolysis in the resolution of the chromophilic placques.

Secondly, studies of the anterior horn cells in peripheral neuritis with clinical symptoms of hypo- and akinesis of these cells not following previous hyperkinesis showed final stages of cytolysis.

The cells were quite thoroughly bereft of their chromophilic granules. (Plate I, Fig. 2) Hence, observing in this latter case that the ultimate stages of cytolysis correspond to akinesis of the neurons, I am led to believe as follows: If these ultimate stages of cytolysis in a neuron are reached by a collective occurrence of the phases of the process, akinesis would be expressed in that neuron.

If these same ultimate stages are attained by a serial progression of cytolysis, akinesis of the neuron would be preceded by hyperkinesis.

It might appear then, speaking broadly, that toxic delirium is associated with the serial progression of cytolysis.

And, on the other hand, it would seem that **stupor, coma and other expressions of hypo- and akinesis of the cortical neurons when developing as an individual group in acute or subacute poisonings of the brain are associated with a more or less collective or simultaneous occurrence of the stages of cytolysis.**

This reference to the different expressions of functions of the neuron apparently associated with different modes of cytolytic development has been made for this reason. In returning to the subject of acute and subacute mania and melancholia we can see that, such clinical antitheses are not necessarily associated with radically different groups or especial kinds of poisons or essentially different pathological processes.

Let us now return to the subject of the relation of these two forms of mental disease in connection with the acute gastro-intestinal class of poisons.

Let us now consider if acute mania might be explained in a measure by being associated with an acute gastrointestinal poison of the properties noted under the class d.

In the action of such a poison we might understand how the stage of excitement or hyperkinesis would be parallel to progressive cytolysis which operates to a greater or less quantitative extent on the cortical neurons.

After the cessation of the poison and the cytolytic process has reached its qualitative and quantitative limits in the involvement of the cortical neurons, there should be a period of hypo- or akinesis governed by the extent of these limits.

This period should last a variable time pending the operation of cytothesis. Speaking generally, if cytolysis has approached its final stages, the stage of excitement is succeeded by a period of hebetude, confusion, stupor and general psychic depression.

The degree of the symptoms of this secondary period of psychic depression is proportional to the stage at which cytolysis culminates and to the number of neurons involved. From theoretical considerations the rapidity of cytothesis should be directly proportional to the qualitative and quantitative extent of cytolysis. If cytolysis be not far advanced and involve comparatively few neurons, cytothesis is rapid; if the reverse conditions attend cytolysis, the cytothetic process is more tardy and the depression period pending its action is more prolonged.

If the action of the poison be more prolonged so that cytolysis passes over into cytoclasis, a certain amount of permanent damage of the brain results from the akinesis of the destroyed neurons.

If the poison then ceases, the cytolytic neurons which have been increased in number by this extra increment of duration of the poison may be repaired so that there is incomplete recovery.

If this be still more protracted, an increased number of neurons undergo destruction and so onward.

The prognosis, therefore, made possible by this factor of cytothesis is favorable in such cases.

Let us now consider **the operation of such a poison (class d) in the production of acute melancholia.**

Very much the same considerations are to be adduced as in the preceding example with regard to cytolysis, cytothesis and cytoclasis with this exception— the stages of cytolysis are probably produced more or less collectively instead of serially. There is no such marked secondary period indicating the culminative qualitative degree of cytolysis as in the preceding example.

The hypokinetic or akinetic condition of the neurons is not preceded by the hyperkinetic period — or, if this advance condition be present, it is of such slight degree as to be practically out of consideration.

The prognosis, as in acute mania, is again made favourable by the factor of cytothesis from the comparatively brief exhibition of the poison.

The manias and primary melancholias, whether of acute or subacute or chronic character, it seems to me, are ear marks of auto-poisons.

The body at large is not obtrusively diseased, as is the case with almost all other groups of poisons. **The general process of exclusion narrows these affections down to an Auto-Toxic Origin.**

They are not observed to be caused by bacterial diseases; and drugs or extrinsic poisons (acute mania from carbon disulphide poisoning in the artisans of rubber factories) which produce such conditions are easily detected.

Acute delirium is the rule in bacterial toxaemias of the nervous system.

We may now consider the production of acute delirium from this conjectural poison of class d. As indicated above, **acute delirium is more characteristic of bacterial poisons, and one or two extrinsic poisons, than of the auto-toxic group.**

Acute delirium of auto-toxic origin must be quite infrequent.

I know of one striking autotoxic origin, of acute delirium in insolation.

The delirium in some of these cases is very severe indeed, and sometimes is practically identical with delirium grave (this is probably largely occasioned by occurrence in patients with an alcoholic history **or in whom other factors mortgage the resisting and recuperative-powers of the body, such as renal and hepatic disease). If such a gastro-intestinal poison of class d be severe and intense enough to produce the hypothetical case of acute delirium, the relations of cytolysis, cytothesis and cytoclasis are, in a general way, quite similar to the instance of acute mania discussed previously.**

II —The Subacute Gastro-Intestinal Poisons

The relations of cytolysis, cytothesis and cytoclasis to the subacute forms are very similar to the acute forms of mania and melancholia.

Mutations and alternations of cytolytic development in the same set of neurons, but especially in successive masses of neurons involved by poisons, are worthy of much consideration in the explanation of the symptomatic expressions in the acute, and especially in the subacute, and chronic manias and melancholias.

If the duration of the poison be comparatively brief, the the prognosis is good. The case slowly recovers.

If the action of the poison be more protracted, improvement is more liable to be recorded than recovery.

If the action of the poison be still farther protracted and becomes persistent, these subacute cases of mania or melancholia pass over into the bourne of the chronic form whence they may never return or recover.

III — The Chronic Gastro-Intestinal Poisons

This group of poisons must be exceedingly important in the production of chronic, progressive mental disease, for it seems at present as if such poisons were intangible and beyond human intervention to deflect the brain from its hopeless path toward destruction.

The mental diseases produced by these poisons begin under the guise of the subacute form — Mania and Melancholia — which then becomes inveterate, progressive and chronic from this persistence of the poison.

If a permanent lesion interferes with the functions of the organs concerned in intestinal absorption, or if a habit inducing perverted chemical reactions in absorptions is once established, the conditions are favourable for development of chronic poisons of the gut.

The latent Poisons of the Alimentary Tube may then become potential and either persistent or confirmed and inveterate in their recurrent exhibition to the nervous system.

In the action of such a poison, the nerve cell is doomed, as it is ordained but once for the organism.

Little by little, sometimes perhaps, by almost infinitesimal increments of chronic cytolysis, the nerve cells pass on to cytoclasis.

Meanwhile new masses of nerve cells start in on the same course.

In no other affections of the human body does the term insidious in its technical qualification of disease apply so forcibly as in the chronic Auto-Toxic Forms of Insanity, viz.:

> ***"A disease progressing to a serious condition without (at first) exciting the notice or alarm of the patient or his friends."***

For such a poison, masking the danger of persistence with mildness, issues from the arcana of the somatic chemical forces, shackles the brain with Procrustean fetters and finally overthrows the nobility of the mind.

The operation of such poisons must eventually change the brain into a condition of terminal dementia.

It must not appear, however, that this more detailed consideration of the gastro-intestinal auto-poisons gives them an undue preponderance over other auto-poisons in the production of mental or nervous diseases.

These poisons have been used merely as a type to illustrate the action of acute, subacute and chronic autopoisons in general with reference to toxic cytolysis, cytothesis and cytoclasis in the nervous system.

It is simpler to use these poisons for such an illustration, **for we know something of the nature of their development.**

If only from partly theoretical grounds this is more than can be said of other groups of auto-poisons, for instance, those of intermediary metabolism.

Cytothesis (The Process of Cell Repair)

Having considered cytothesis somewhat at length, I am impelled to attempt to stimulate a more comprehensive application of therapeutic measures based on this process. I would urge the importance of this point with more words; but, as **Cytothesis is the Salvation of the Nervous System In All Forms of Poisoning, a plea to directly aid this process by Therapeutic Measures may be made brief. The primal aid to render the natural redemption of the integrity of the poisoned neuron in cytothesis, is to modify the intensity or duration of the poison.**

Hence, Therapeutic Measures, such, for instance, as have been adopted by W. C. Gibson in "Auto-Intoxication and Insanity", become very important indeed, and removed from empiricism.

This observer Treated a case of stuporous melancholia with the subcutaneous Saline Injections.

In this way, by controlling, if only temporarily, the duration and intensity of the poison, he aided cytothesis to such an extent that the symptoms improved considerably.

This and related Therapeutic measures should outweigh, it would seem, from theoretical considerations, the value of drugs, for they strike at the root of the evil.

The Value of Hydro-Therapeutic or other Anti-Toxic Measures in Insanity

A second important question in connection with therapeutics of the insane relates to the possible **cytolytic (relating to cytolysis, the dissolution or destruction of a cell) action of some of the drugs used in insanity.**

If any of these Drugs commonly used in the treatment of insanity Produce Effects by Cytolysis (Pathologic Dissolution or Disintegration of Cells), their administration demands much discrimination.

I can understand in a toxic disease that the substitution of an artificial poison in a drug for the toxine may be of benefit.

But to Add an Artificial Poison to a Toxic Substance Acting in the Nervous System Is A Sin. I have in mind the Bromides more particularly, and Their injudicious [unwise] empirical use in Epilepsy.

With these general considerations of **the action of gastro-intestinal auto-poisons on the nervous system**, we may now consider a definite example of this form of auto-intoxication in Tetany.

After experimental Thyropravia, Uraemia, Insolation, Myxoedema, and Addison's Disease, Tetany is a very clear example of an Auto-Intoxication, and one which operates in a most predominant way on the Motor Cortex.

From the fact that Tetany is so frequently associated with gastro-intestinal derangement, there can be but little doubt that the auto-toxic substances are absorbed from either the stomach or the intestinal tract.

The poison acts principally and selectively upon the motor segment of the central nervous system, especially its cortical portion.

Dilatation, ectasia and atony of the stomach, so often associated with tetany, give rise to conditions favourable for an auto-intoxication.

The food is retained in the stomach for an undue length of time, and gives origin to a number of secondary products which are not present in normal gastric digestion. The hyperacidity of the gastric juice under these conditions of the stomach entirely modifies the whole chemical process of gastric digestion.

The peptones are produced in excessive amounts.

They remain in the stomach subject to an unduly prolonged action of the hydrochloric acid, and it appears under these circumstances, that certain poisonous bodies may be formed, called pepto-toxins.

Bouveret and Devic isolated from the contents of the stomach in 3 cases of tetany, by Brieger's method, a substance which produced spasms.

Albu was able to demonstrate in the same patient that an alkaloidal body existed in the urine during the attacks, but was absolutely free from the urine in the periods between the attacks. The presence of these substances in the urine is a step nearer to the real demonstration of the circulation within the body of some absorbed poison of an auto-toxic nature in these cases of tetany; for to exist in the urine it would appear that the poison had been excreted from the blood.

The crucial experiment, however, is to test the toxic qualities of the blood of the subjects of tetany. If the blood serum be injected in animals and the symptoms of tetany can be reproduced in this way, we have a physio-logical demonstration of the toxic substance that will place tetany on the auto-toxic basis with certainty.,

It is a matter of clinical experience that many cases of tetany are accompanied by disorders which make most favourable conditions **for fermentative and other abnormal products in the complicated chemistry of the gastro-intestinal tract to gain access to the circulation.**

Yet the disease ought not to be considered as entirely due to the auto-toxic substances derived from the alimentary tract.

Probably a number of poisons other than those derived from disordered conditions of the alimentary tract are capable of producing the symptoms of tetany. Tetany seems to be due to poisons which act primarily on the motor cortex. If this be the case, certainly a very large variety of poisons is capable of acting in this selective way upon the motor segment of the brain; for instance, tetany in animals may be elicited by injections of chloroform and ergotin.

Finally, tetany is not infrequently observed accompanying myx-oedema and seems to be associated with the accumulation of mucin in the connective tissues.

Mucin is to be regarded as an intermediary product of general tissue metabolism in the organism, (Poehl's Gewebsathmung) and if it is allowed to accumulate in the body, it might act as a toxic substance, or perhaps merely indicate results of the action of some other poison.

Thus, some examples of tetany may be ascribed to the action of toxic products in nowise connected with disturbances of the alimentary canal.

The form of auto-intoxication resulting from the removal of thyroid glands in dogs seems to be a perfectly typical example of a very severe form of tetany.

The dogs have tonic contractions of the muscles, which soon become universal; there are incessant fibrillary tremors, and if the thyroid has been completely removed, the symptoms are accompanied with a fatal result in a very few hours or days. Through the courtesy of Dr Cunningham of the Department of Physiology in the College of Physicians and Surgeons, I have had an opportunity of studying the nervous system in several cases of experimental thyropravia, with the result of finding an acute universal destructive degeneration of the cortical ganglion cells.

The appearances of such cortical cells are quite like the cytoclastic cells shown in Figure 2, Plate I. Apparently the poison in these cases of experimental thyropravia, in the beginning stages of its production, exerts a selective action upon the motor segment of the cortex.

But as the poison, or poisons accumulate, and become larger in volume, or greater in intensity, spheres of the cortex beyond the motor segment are progressively involved.

And, finally, at the death of the animal, there is this universally acute destructive degeneration of cortical cells as an expression of the chemical reaction between the poison on the one hand and the constituent elements of the ganglion cell body on the other.

In connection with the relation of some forms of tetany to the group of auto-intoxications caused by lesions of the thyroid gland, it is interesting to note that Kobert calls attention to the fact that mannin, a constituent of ergotin, which elicits attacks of tetany when injected in animals, belongs to the carbohydrate group, and resembles mucin.

That the poison of tetany probably, when exceptionally virulent in quality or large in quantity, acts upon other spheres of the cortex beside the motor segment, is shown in the case reported by Loeb.

This was associated with ectasia of the stomach, but besides the purely motor symptoms of tetany, there was a distinct invasion of the sensorium.

There was delirium, apathy and mental hebetude.

The case reported by Wilgus in the second number of the State Hospitals Bulletin is exceedingly interesting, for it certainly appears to be a distinct example of an autointoxication due to a very severe grade of intensity of the toxic substance.

In this case there was not only the purely motor phenomena of Tetany in a most marked and intense degree, but it was also associated with Insanity.

Nor does the rise of temperature in Wilgus case interfere with the interpretation of the symptoms as an expression of an auto-intoxication.

It will be shown presently that sun-stroke itself, with its accompaniment of abnormally high temperatures, is a most brilliant illustration of an auto-intoxication.

I do not hesitate to believe that in the case of Wilgus the results of the action of the poison upon the cortical cells would have shown changes quite the counterparts of the figures 1 and 2, in Plate I.

This author's case, in many ways, is quite the counterpart of the severe, rapidly fatal form of auto-intoxication, which produces tetany such as is seen in dogs deprived of the thyroid gland.

It should be remembered in this connection, as noted above, that such dogs die, provided the thyroid be completely removed, in a very few days, not exceeding 5 to 10.

To Sum Up

Tetany seems undoubtedly to be due to an auto-intoxication; when the poison is small in volume or mild in intensity it exerts a selective action upon the cortical portion of the kinetomeric system, and remains limited, apparently, to the motor zones of the cortex. **Such are the cases of tetany associated with the majority of instances of gastric ectasia, or other derangement of the gastro-intestinal tract.**

When the poison becomes more abundant or more intense its action, while predominantly and initially exhibited by a selective affinity for the motor segment of the cortex, it extends beyond this sphere and involves the ganglion cells of the whole cortex. Such cases as these are of the type reported by Wilgus, of the experimental thyropravia in dogs. It is difficult to determine to what extent tetany may be produced by an inhibition of the functions of the organs, which act as a barrier in antagonizing or nullifying **the Toxic Substances absorbed from the Gastro-Intestinal Tract** under normal or pathological conditions of digestion.

The liver is believed to act in such capacity. And, it is possible, then, that in some cases of tetany in which no visible change in the gastro-intestinal tract has been found on autopsy, **minute changes in the liver may be responsible for the absorption into the circulation of toxic substances** which, under normal conditions of the liver, are nullified in that organ.

The Toxic Power of the Blood in Auto-Intoxications in General

The obscure character of the auto-toxic substances in general and the obscure character of the poisons in the extensive list of insanities probably produced by auto-intoxications, does not interfere with the perfectly definite morphological studies which can now be made. In Case After Case of Mental Disease - it is my belief - that we shall see these traces of the action of a poison in these ever-recurring mutations of cytolysis and cytoclasis of acute, subacute or chronic production. There still remains to be considered beyond this more or less definite category **of Auto-Intoxications, such as Uraemia, Thyropravia, Myxoedema, Tetany, and the later Neural Symptoms in Addison's Disease, a number of obscure Affections of the Nervous System, which point more or less Strongly Toward an Auto-Toxic Origin.**

These cases are as yet very few in number, and their Auto-Toxic character rests only upon an inferential basis, but little by little such cases will accumulate in number. Many of the psychoses will probably be added to them, and in the course of time, there will be a gradual accumulation of more definite proof of their Auto-Toxic character. Examples of these more obscure auto-intoxications of the nervous system are cases reported by Pick and Séglas. **Both of these cases appear to have been associated with auto-intoxications from the alimentary tract. In Pick's case, there was an Atonic Condition of the Stomach, Associated With Many Neurasthenic Symptoms, Manifestations of Physical, and Psychical Depression, Headache, and Rapid Heart Action.**

These symptoms seem distinctly Due to a Poisoning of the Nervous System by an Auto-Intoxication which Took Place Through the Stomach, for The Symptoms Disappeared Absolutely Under an Anti-Fermentative Therapeusis.

I recall the case of a man of intellectual primacy, who has had attacks of mental depression of moderate severity which have occurred over a period of years.

These Attacks Are So Obviously Associated With Corresponding Attacks of Gastro-Intestinal Derangement, that the man himself **has long since learned to associate the two things together. He Can Predict the Occurrence of these Gastro-Intestinal Crises By The Preceding Attacks of Mental Depression.**

The attacks of mental depression have no relation to any adverse condition of his affairs, and almost border on melancholia.

During these attacks, lasting 4 or 5 days, he is extremely depressed, uncommunicative, unable to transact business, and absorbed by the untoward pessimistic attitude which everything in the outside world seems to assume.

All of This Disappears with the Occurrence of the Gastro-Intestinal Crises.

This may seem a common-place episode in our narrative, but it appears to me, that it is merely a question of degree between such an instance, and the initial symptoms of some cases of acute melancholia even with suicidal tendencies.

Seglas reports a similar case, and sees an analogy and sustaining proof in the **Auto-Toxic nature of some of the Psychoses, and Functional Nervous Disturbances in that extrinsic poisons,** for instance, lead and alcohol, **lead to similar forms of Mental Disturbance.**

And I may add from cytologic studies of the nervous system, in both lead and alcoholic poisoning, that **the effect of these poisons on the nervous system is not essentially different from that of several Auto-Intoxications**, namely: Uraemia, Thyropravia, and Insolation.

Both the extrinsic poisons and auto-intoxications, as well as other forms of poisons, show the same result, namely, various phases of parenchymatous degeneration of the Nervous System. Evidence by exclusion is certainly accumulating that a very rare disease of the nervous system, known under the term of periodic family paralysis, is to be ascribed to an Auto-Intoxication.

The disease was first described in 1874, by Hartwig, and has since been observed by Westphal, Oppenheim, and a number of others.

This disease consists in the sudden appearance of paralysis of the extremities at the most irregular intervals. After several hours, or days, this paralysis disappears entirely. There is also corresponding to this temporary paralysis of the extremities, a correlated disappearance and return of the electric excitability of the muscles.

Goldflam ascribes this unique nervous affection to an Autointoxication.

In his case a 17 year old boy had brief attacks of general paralysis, which lasted usually 2 days, and occurred about once a week.

These attacks began by weakness in the legs in the evening, and in the course of the next morning the entire body, with the exception of the head, was paralyzed.

Sensibility was unaltered and reflexes diminished.

At the end of the attack, there was extreme sweating, and motility returned in the reverse order of its appearance; it reappeared first in the arms, then in the trunk, and finally in the legs.

In the family of the mother of the patient 11 members exhibited the same symptoms, both males and females being attacked in the same way.

The disease generally began at the age of between 15 and 20 years.

Goldflam injected the urine of the patient in the ear vein of rabbits shortly after the attack, and also in the interim, and found that the poisons of the urine were much greater during the attack. Between the attacks the urine was hypotoxic, as compared with the condition during the attacks, which was hypertoxic.

If these results with the urine should be corroborated, they would indicate the poison is not of the "retention group of normal waste products," but that the poison develops de novo within the body.

If this affection of periodic family paralysis is an auto-intoxication, it is exceedingly suggestive in exciting suspicion of the auto-toxic nature of the psychoses of periodic development. It is interesting, in connection with **the toxic basis of Epilepsy,** to refer to the experiments of Griffiths, who **found in the urine of an Epileptic a leucomaine which produced general tremors, vomiting, mydriasis, and, eventually, death when injected into dogs.**

Voisin records **hypertoxicity of the urine after Epileptic attacks.**

Rachford, of Cincinnati, has also isolated, **in the urine of a patient with epileptiform manifestations, some of the xanthin and paraxanthin bodies which produced toxic symptoms when injected in animals.**

The increase of neuroglia cells in the sub-cortical zones, which I have found in several cases of Epilepsy, does not at all interfere with the supposition of the auto-toxic origin of this affection.

On the other hand, it is a factor in favour of this basis of Epilepsy, for I can demonstrate that one of the expressions of a chemical reaction between a toxic substance and the more lowly organized neuroglia cells and the meso-blastic connective tissue cells of the nervous system is karyokinesis.

Hence, after the periodical momentary contacts of the nervous system with the poison extending through months and years, a proliferation of the neuroglia cells is to be expected.

How much of a selective action the poisons which produce epilepsy have upon different spheres of the cortex, or to what extent they operate upon the whole cortex uniformly, very little can be definitely said at present.

It would seem most probable, at any rate during the later periods of epilepsy, that **the toxic substances producing Epilepsy operate upon the whole cortex at large.** It has been suggested that **Landry's paralysis is also an example of auto-intoxication of the nervous system.**

The anatomical changes in Landry's paralysis offer no impediment to the acceptance of this view.

Bacterial Toxaemia as a cause for Landry's paralysis.

The Auto-Intoxications due to lesions of the kidneys, Must Be Very Important Factors Indeed, In The Production of Mental Diseases.

Perhaps the clearest and simplest example of **the profound damage that is liable to be wrought upon the nervous system in the acute renal intoxications is eclampsia gravidarum.**

Here is again a signal example of the very prompt effects on the nervous system of a severe, intense poison, and it is accepting but little responsibility to predict that the examination of the cortex in such a case of eclampsia will disclose an acute degeneration of the ganglion cells practically quite the same as shown in Plate I.

This acute, intense, violent poison ought to cause a degeneration of the cells with a tendency toward the destructive type.

This degeneration of the cells is probably present in all cases of eclampsia of any degree of severity, but, as has been repeated so often, acute degeneration of the ganglion cells is not necessarily destructive.

The cell may recover, both in structure and function, from such a degeneration, but, on the other hand, if the poison be too severe or have too persistent an exhibition, the cell may become permanently destroyed.

This is the reason that many of the cases who do recover from eclampsia have a permanently damaged cortex from the acute destructive degeneration of the ganglion cells, and ultimately pass into the hospitals for the insane with one form or another of mental disease.

Very much the same remarks are applicable to the acute uraemias.

In this condition there is also this same acute degeneration of the ganglion cells as an expression of a chemical reaction between the cells and the toxic uraemic products. In most of these cases of acute uraemia, however, clinical history enables one to justly infer that the quality or quantity of **the poison is such that, when it disappears, there may be a restitution of the ganglion cell — a recovery both in function and structure.**

The chronic or persistent forms of auto-intoxications from the kidneys are more complicated and probably have a most important bearing as a direct or indirect factor in the production of mental diseases. In the first place, the intermittent and repeated attacks of uraemia are compatible with a degeneration of the recovery of the ganglion cell after the cessation of the uraemic products.

But, as in the case of the exhibition of alcohol, the recovery of the cell can not be expected to go on indefinitely.

If there is a persistent exhibition of the uraemic poisons, as in chronic alcoholism, eventually the ganglion cell ought to take on some form, however slight, of permanent damage to its structure and function.

In uraemic coma from chronic Bright's disease, I have been able to demonstrate acute degeneration of the cortical ganglion cells practically similar to that shown in Plate I, Fig. 1.

In another case wherein convulsions were a more marked phenomenon of the uraemic condition than coma, only the initial phases of an acute degeneration could be demonstrated in the cortical ganglion cells. Thus, probably, to a degree which is slight, **chronic renal auto-intoxications damage the ganglion cells directly.**

But a second, although indirect, **factor of renal disease, in modifying the action of other poisons in general upon the nervous system, is of very great importance.**

This consists in the impairment of the eliminative capacity of the kidneys when other poisons are introduced into the body.

When the eliminative capacity of the kidney is impaired, and when poisons, either from an extrinsic, or bacterial, or other auto-toxic source, are present in the body, they become invested with much greater significance than in the normal individual.

Such poisons introduced into an individual with chronic kidney disease operate with a much more damaging effect, especially on the nervous system.

They operate for a longer period of time by reason of the impairment of the eliminative powers of the kidney, and the duration of an exhibition of a poison to the nervous system is the fundamental factor in determining whether the resultant acute degeneration shall have a recuperative or destructive termination on the cells.

It is not difficult to realize that a poison from an extrinsic source, a bacterial toxin, or an auto-toxic poison, operates with greater destructiveness on the nervous system in individuals with diminished capacity of elimination through the renal organs.

This was shown most strikingly in our observations on sun-stroke at the Pathological Institute during the past summer.

Quite uniformly **the cases which failed to recover from the auto-toxic poisons of sun-stroke were individuals whose kidneys were considerably damaged.**

In other individuals apparently whose kidneys were normal, the poison or poisons were seemingly rapidly eliminated, and these cases escaped or recovered from the serious acute degeneration of the cortical ganglion cells.

In the group of cases with kidney lesions the poison apparently remained in the body, and as a result there was acute degeneration of the ganglion cells with a destructive tendency. The Auto-Toxic Substances in sun-stroke are such violent and intense poisons that the whole question of recovery or death of the patient depends upon rapid elimination of the poison by the various Emunctories. I can think of no other disease where a normal kidney acts as a greater safeguard in eliminating the poison of such a profoundly virulent type.

Apparently only a few hours are necessary, if the elimination of this poison be interfered with, to produce death or a permanent damage to the nervous system, such as we see in the cases in the hospitals for the insane, who owe their impaired mental condition to an acute, destructive degeneration of the cortical ganglion cells after sun-stroke.

Thus the importance of the kidneys in auto-intoxications and in other groups of poisons in the production of mental diseases may be regarded from 2 standpoints:

1. In the direct action of retention of renal intoxicants on the nerve cell, whether of acute or chronic exhibition, is to be regarded.
2. In the indirect but very important factor which disease of the kidney becomes in interfering with the elimination of other groups of poisons, whether of an extrinsic, bacterial or auto-toxic nature, must be taken into consideration.

Poisons, whose action upon the ganglion cells might readily be recovered from in a normal individual, become much more dangerous to the integrity of the nervous system by reason of their protracted action in individuals with damaged kidneys.

Thus, for instance, in Alcoholism, Typhoid Fever, or Influenza, the liability to damage of the cortical cell is greatly enhanced by diminished eliminative power of the kidneys.

Finally, in chronic lesions of the kidneys, it is not only a question of interference with the protective power of the kidneys in eliminating toxic substances in general, but the condition permits of a combination of poisons, when some other disease becomes engrafted on the body.

There are, in the first place, the auto-intoxications due to the accumulation of materials which are imperfectly excreted by the kidneys; then, if a bacterial toxine be developed in the body in such a case, there is a mixture of two groups of poisons. This brings up one of the most difficult of all of the groups of toxic substances mentioned in the initial paragraphs of this text, viz.: **combinations of Auto-Intoxications, and Bacterial Toxins.**

It is comparatively easy to understand the action of a single poison circulating in the blood, and how such a poison would exert a chemical action upon various body cells, especially the brain cells, and the manifestation of this chemical reaction in acute degeneration.

But very rarely in any of the toxic diseases is the case as simple as this.

In such a disease, for instance, as typhoid fever, there is not only the comparatively simple action of the toxines, elaborated by the typhoid bacillus, but in addition to this, it must be taken into consideration that disturbance of the kidney functions induced by the action of this toxin on the kidney cells exists. Thus, there is, therefore, a combination of poisons which contains at least the toxine of the typhoid bacillus, plus a form of auto-toxic poison, due to the secondary involvement of the kidney.

In the same way in all of the continued fevers or acute infectious diseases, there would seem to be indicated the primary bacterial toxin, associated with all of the auto-toxic products resulting from the derangement of the various secretory organs which have been secondarily damaged by the primary bacterial poison.

From this point of view, any of the acute bacterial diseases becomes a very complicated matter, indeed, by reason of the fluctuations in the volume or **intensity of the primary poisons and the mixtures of the bacterial toxin with the various secondary auto-toxic products.**

Diseases of the kidney must place a very heavy mortgage on the nervous system in the action of poisonings which may happen to the individual in the future. Before leaving this introductory text upon the relation of the auto-intoxications to the nervous system, the subject of eclampsia infantum, myasthenia gravispseudo-paralytica, diabetic coma, and coma carcinomatosum deserve mention.

The Eclamptic Symptoms of children receive the best explanation from the auto-toxic basis.

Reflex Irritation, dentition and vascular fluctuations in the brain and the like, are certainly vague, indefinite explanations of the eclamptic seizures in children, compared with the action on the **motor cortex of auto-toxic substances, derived principally from the alimentary tract.**

Nor is it necessary to conceive that there is any inherent weakness on the part of the brain in children to explain the frequent occurrence of convulsions.

The explanation of the frequent occurrence of convulsions in children would seem to be rather **due to the fact that they are subject to more frequent dietetic errors or digestive derangements than in the adult, and have not completed their education of the functions of the gastrointestinal tract.**

Herter considers this factor in the etiology of eclampsia infantum so uniformly a causative agent, that he bases the success of his antiseptic therapeusis of the gastro-intestinal tract thereon.

Albu relates a case of a ten year old boy in which moderately **severe cerebral symptoms depended so definitely on an auto-intoxication of the gastro-intestinal tract,** that it is well worth relating here.

The boy had frequent attacks of convulsions of such a grade of severity, together with a loss of consciousness, that they well answered the description of hystero-epilepsy.

As a matter of fact, these symptoms were due to a gastro-intestinal auto-intoxication, and were accompanied by a dilatation of the stomach and were regularly preceded by digestive disturbances, which were very easily controlled by treatment. The boy left the hospital several times.

As long as the treatment of the gastric disorder was maintained the boy was absolutely free from the attacks. For some time, as often as he left the hospital, he returned in a brief period with the same set of symptoms. This very commonplace instance, however, of **the action of auto-toxic products from the gastro-intestinal tract shows how almost synonymous are auto-intoxications and symptoms and diseases of the nervous system.**

Practically the only symptoms in this case were those of the nervous system.

The local symptoms were almost unobtrusive. **Diabetic Coma is again an example in all probability of an acute degeneration of the ganglion cells, due to the action of an auto-toxic poison**, as shown in Plate I.

The same is to be said of the coma, often associated with carcinoma of the gastro-intestinal tract, and coma occasionally associated with severe anaemia, miliary tuberculosis, cirrhosis of the liver, senile cachexia, etc.

It is possible for auto-toxic products to exert a selective activity on the muscular system. Jolly describes a symptom-complex under the name of myasthenia gravis pseudo-paralytica, which seems justifiable to place in the category of auto-intoxications. The essential feature of this disease consists in the periodic appearance of paralytic flaccidity of the muscles of the entire body, although the muscles of the extremities are most distinctly involved.

There is very rapid fatigue of the muscles after exertion.

Although muscular activity returns after a period of rest, renewed exertion is accompanied with the same peculiarly rapid fatigue.

Electric excitability corresponds uniformly with the spontaneous stages of rest and fatigue in the muscles.

The serious feature of the disease is the involvement of the muscles of deglutition and respiration, which may lead to a fatal termination.

The most satisfactory illustration in many respects of the whole groups of auto-intoxications is the subject of insolation.

The investigations on sun-stroke at the Pathological Institute in the past summer, during the great outbreak of this disease in New York City, places the autotoxic nature of this disease beyond any conjectural basis.

For it is the most brilliant and straightforward example of an acute, intense, virulent poison originating within the body, which acts most rapidly and violently upon the nervous system.

During the previous summer an examination of a case of insolation convinced me that the acute degeneration of the cortical cells must be due to the action of a poison.

And the memorable outbreak of the affection during the past summer, in New York City, lasting over a week, afforded a unique opportunity for studies to substantiate the toxic theory of the disease indicated by the microscopic appearances in the case of the previous year.

Through Dr Phoebus Levene, Associate in Physiological Chemistry at the Pathological Institute of the New York State Hospitals, an extended series of studies of the effects of the body fluids and excretions of living cases of sun-stroke were made on animals. Repeated injections of the urine in rabbits from several different cases showed uniform hypotoxicity just after the occurrence of the sun-stroke. I**njections of the cerebro-spinal fluid, and ventricular fluids of the brain from the fatal cases produced lethal results in animals.**

But, inasmuch as these animals died when not under observation and some hours after the injection, the results of these experiments can not be given much significance one way or the other. Injections of the blood serum, however, taken from 2 patients during the period of hyperpyrexia, gave most prompt and decisive results. Quantities from 5 to 8 cubic centimeters in volume of this blood serum injected in the ear vein produced uniformly lethal results in 5 animals in succession within 45 to 60 minutes after the injection.

The animals had very violent convulsions, which were usually so severe that they died in the midst of the attacks within 4 or 5 minutes.

There were clonic and tonic convulsions of all 4 extremities, opisthotonos, and, at times, propulsions forward of the whole body. The animals also had a rise of temperature of 2 or 3 degrees in the rectum shortly after the injections of the fluid. This rise of temperature, however, we do not regard as indicative of any particular significance, since it may occur after injections in the ear veins of rabbits with a variety of reagents.

Any one who has had any extensive experience in injecting foreign substances into the ear veins of rabbits, will have noticed not infrequently, that fatal results occur which are due to manipulative procedures, and can not at all be ascribed to the action of the material used.

But there was no mistaking the cause of death which occurred so uniformly in these animals in succession.

This result is in consonance with the hypothesis that the rapidly fatal course in severe cases of sun-stroke, **is due to an intense, rapidly acting poison, circulating in the body fluids.**

If this view be correct, it was to be expected, as was in fact the case, that even the small quanity of blood serum used in the rabbits would produce experimentally this rapid, prompt and fatal effect. Finally in the fourth set of experiments urine from convalescing patients was injected into the blood circulation of rabbits. **This was found to be most decidedly hypertoxic.**

Dr Levene's experiments, therefore, seem to indicate that some toxic product is retained within the body during the initial periods of insolation.

This toxic substance gains access to the blood, and finally it seems that the poison disappears from the blood and is excreted by the urine.

It is not too much to say that the virulence of the auto-toxic poison in some cases of sun-stroke is fully as rapid and violent as snake venom and considerably resembles its action. Cases of sun-stroke which entered the hospitals with purple, swollen faces, rapid and very much enfeebled heart action, and profound collapse, with death occurring within 1 to 2 hours, are surely examples of the effects of the most violent poisons that we know of.

Such a Poison seems immediately to act upon the Ganglion Cells which Govern the Heart, and which Manage the Vaso-Motor Apparatus.

This brings about such a rapid suspension of the most vital functions that the body hardly has a chance, so to speak, to react against or eliminate the poisons.

I have instanced sun-stroke as a most straightforward example of auto-intoxication in this connection to show you again that the traces it leaves on the nervous system are most tangible and distinct.

It is, again, as we shall see so often repeated in acute toxic diseases of the nervous system, generally, a manifestation of acute degeneration of the ganglion cells, such as is shown in Plate I.

And if these changes in the ganglion cells be carefully considered, the whole clinical history of sun-stroke — and this consists largely in manifestations of the nervous system — becomes clear and distinct.

The Delirium, Convulsions, Coma, the Acute Maniacal Condition, practically equivalent in some cases to conditions of Delirium Grave; the Tetanus-like symptoms, the Opisthotonos, tonic and clonic Spasms; the clinical pictures in others which simulate the manifestations of Hydrophobia; and, finally, the permanently Damaged Mental Status which is left behind in many victims of Sun-Stroke who make their way into the hospitals for the Insane: all of these things can be clearly interpreted by the changes wrought in the ganglion cells by this auto-toxic poison similar to the changes shown in Plate I.

In the cases of sun-stroke which terminate in one or another form of Insanity, the acute degeneration of the cortical cells has gone on to a destructive phase.

In the cases which recover in a few hours there is probably little, if any, degeneration in the cortical cells.

There is the temporary action of the poison on the groups of ganglion cells which manage the heart and Vaso-Motor Systems, and when the poison is removed the recovery of the individual is comparatively rapid, and between these two extremes of cases which recover rapidly and cases in which the nervous system is permanently damaged, there are all sorts of gradations in the degree of severity in the acute degeneration of the nervous system.

The source of this Auto-toxin in Sun-stroke is unknown to us, as well as the relations of the poison to the production of the Hyperpyrexia (exceptionally high fever, greater than 41 C., which can occur in patients with severe infections), and also its relation to the cessation of perspiration prior to and during the onset of the attack of insolation. The determination of the Uro-toxicity in these researches on insolation was controlled, as far as possible, by chemical analysis of the urine.

The auto-toxic causation of sun-stroke is based on the toxicity of the blood serum taken from living cases, conjoined with the structural changes in the ganglion cells which show the handiwork of a poison.

We now come to the consideration of the testimony of the auto-toxic basis of mental diseases, along the lines of physiological chemistry, and the physiological testing of the toxicity of the body fluids in animals. **Some of the results of the testing of Uro-toxicity in insanity seem very striking and convincing.**

I have in mind, also, the possibility of the occurrence of toxic products in the urine from the materials formed by disintegration of the nervous system.

Thus, in a chronic auto-intoxication of the nervous system, the urine may indicate the presence of the primary auto-poison, but it may also contain, in addition, substances which come from the cytolysis or cytoclasis of hordes of neurons.

Hand in hand with this, **a large percentage of the energy of the staffs of the State Hospitals should be directed toward the systematic accumulation of the experimental determination of the toxicity of the body fluids, particularly the urine and blood, in the insanities.**

We must try to know all of the variable exhibitions and fluctuations in intensity and duration of these **Auto-poisons in Insanity by Uro-toxic determinations.**

The modification which Gibson in **"Auto-Intoxication and Insanity", was able to produce by subcutaneous injections in a case of Stuporous Melancholia by diluting the body fluids and stimulating the eliminating power of the Emunctories, may be regarded as much better evidence of an Autointoxication** than **many of the instances where Psychic Diseases are so positively ascribed to Auto-Intoxications on premises of uro-toxic determinations.**

A discussion of the subject of the action of Autointoxications of the mother upon the developing foetus is very important in this narrative, which attempts to consider some points in the Toxic Pathogenesis of Mental Disease.

Auto-Poisons must play an important part in the production of protal defects in the nervous system.

Several diseases of the nervous system known (Little's disease or congenital idiocy) or suspected to be due (some forms of Epilepsy, Huntington's Chorea) to protal defects of the nervous system may be really due to the action of auto-poisons. The so-called group of "protal diseases of the nervous system" may then be divested of their obscurity in being placed in the toxic category.

I hope to refer to this matter of the action of auto-poisons on the foetus again in the continuation of this narrative in connection with the histogenesis or embryology of the cytologic elements of the ganglion cells, particularly the chromophilic placques, which I have studied in human embryos, and in the embryos of the tern, pig, acanthias and raia, also in the motor cortex of the cat, dog and human embryos at maturity. Having in this very general way considered some of **the relations of the Auto-Toxic Group of Poisons to the production of Neural Diseases, it would next be in order to discuss in the same way the relation of the other groups of poisons, viz.: Bacterial Toxins, combinations of Bacterial Toxins and Auto-Intoxications, and finally, extrinsic poisons in relation to the production of Neural Diseases."** - Dr Ira Van Gieson, MD, Director State Pathological Institute (selected after a special competitive civil service examination, which embraced a series of questions in general pathological anatomy, the architecture of the nervous system, minute anatomy of the nervous system, pathological anatomy, technique and methods of neural investigation and the lines of research to be applied to the study of the Pathology of Insanity, Dr Van Gieson, MD, has been connected with the Laboratory of the College of Physicians and Surgeons in New York City, for 10 years as an Instructor in normal Histology and Neurology), in "Remarks on the Scope and Organization of the Pathological Institute of the New York State Hospitals", The State Hospitals Bulletin, October 1896.

> ***One should be careful of the system of the body in producing Toxins from the Foods taken, and from the Colon, and the Drosses in the System Intoxicating the Nerve Reflexes through the lower portion of the Hepatic Circulation.***

Lacteals Are Important Structure of the Lymphatic System - Study in Detail

Lacteals

"Lacteals are the Central Lymphatic Vessels in the villi of the small intestine and perform nutrient absorption, especially Dietary Lipids, and the transportation of antigen and antigen-presenting cells.

Lymphatic Endothelial Cells

Remodeling, Proliferation, and Cell-Cell Junctions of Lymphatic Endothelial Cells (LECs) in lacteals Are the Basis of the Maintenance of Lacteal Integrity and Dietary Lipid Absorption. Normal Lipid Absorption in the Diet Depends on Sound Lacteal Development and Proliferation, especially integrity maintenance. Namely; maintaining the appropriate proportion of button-like and zipper-like junctions. Maintaining the integrity, and transforming button-to-zipper junctions in lacteals **are strongly connected with obesity, which could be Regulated by Intestinal Flora,** and molecular signalings. **The Majority of Nutrient Uptake is Absorbed in the Small Intestine**, such as: Carbohydrates, Protein, Vitamins, and Lipid. Of these, **the Lymphatic Vasculature of the Intestine plays an Essential Role in lipid absorption.**

Lymphatic Vascular System

The Lymphatic Vascular System is closely related to immune functions and transporting dietary lipids from the small intestine. Lacteals are Lymphatic Capillaries in the Small Intestine that absorb dietary lipids and participate in the gut immune response.

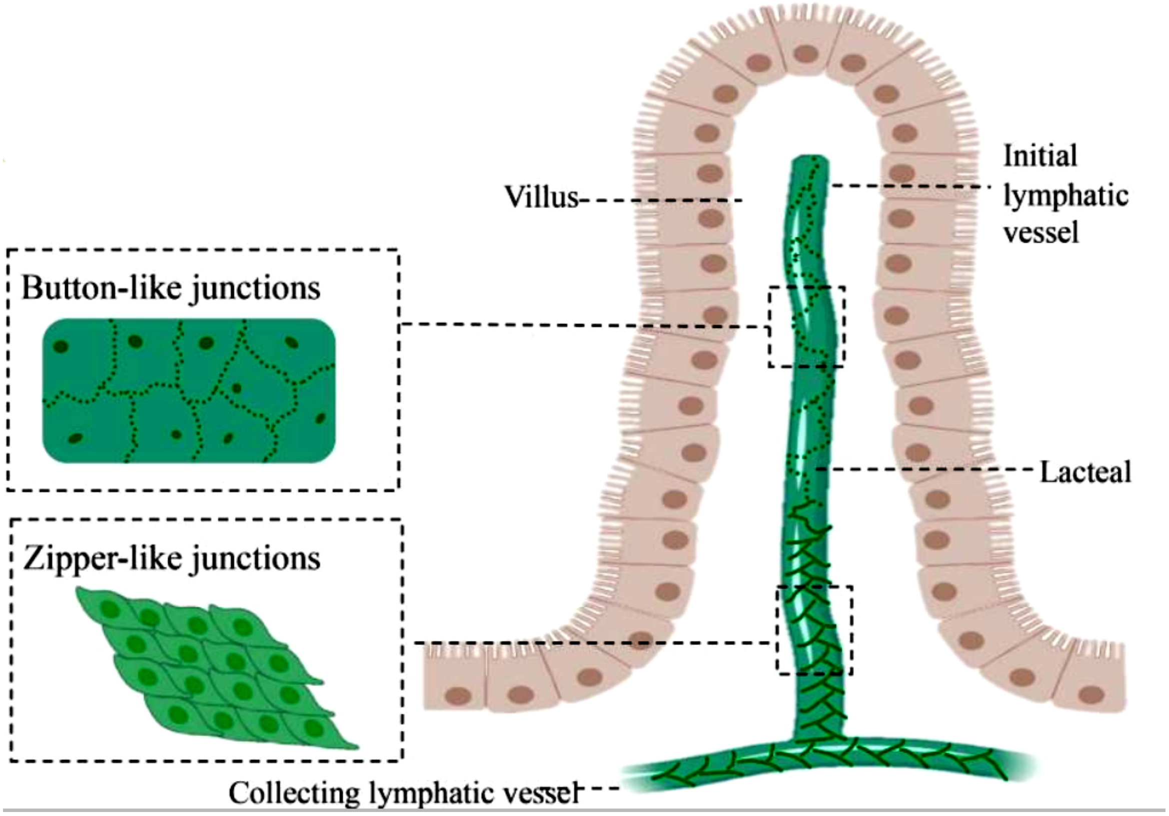
Regenerative and Proliferative Characteristics

Lacteals have Regenerative and Proliferative Characteristics, distinct from embryonic lymphangiogenesis or quiescent lymphatic vessels in other tissues. There are 2 lacteals in the duodenum and proximal jejunum villi (on average), whereas most residual small intestine villi have only 1 lacteal, and the length of the lacteals shortens gradually with decreased villus length from the proximal duodenum to the distal ileum. The lacteal size accounts for 60% to 70% of the villus length in different intestinal segments.

Lipid Uptake in Lacteals

The Lymphatic System devotes itself to Dietary Lipid Uptake to provide Energy to the Whole Body. Practically, Major Dietary Lipids Are Transported

From The Lymphatic System into the Blood through chylomicrons in Lacteals of the small intestine. The Proximal Duodenum Is The Uppermost Place To Absorb Dietary Lipids hydrolyzed by gastric, and pancreatic lipases. Then, the products mix with liver-derived bile acids to comprise free fatty acids (FFAs) monoglyceride micelles. Angiopoietin-like 4, a secreted glycoprotein, inhibits lipoprotein lipase, and **regulates lipid uptake to prevent Enterocyte Lipid Overload in the Intestine (occurs when the small intestine's absorptive cells take in more fats than they can process or secrete; this leads to an excessive buildup of triglycerides in cytoplasmic lipid droplets, contributing to postprandial lipemia, insulin resistance, and Systemic Metabolic Disorders).**



The small intestine has a powerful function in lipid absorption and immunosurveillance of gut microbiota, mainly depending on lacteals. In the clinic, **Lacteal Dysfunction Results In Defective Nutrient Absorption**, such as protein-loss enteropathy-induced systemic lymphopenia, hypoalbuminemia, and hypogammaglobulinemia, because of serum protein loss in the gastrointestinal tract. **In clinical Inflammatory Bowel Diseases, Crohn's Disease is thought to be Related to Intestinal Lymphangiectasia, with Increased Intestinal Lymphatic Capillary Permeability During Inflammation. In Colorectal Cancer, patients without distant metastases, the Status and Number of Lymph Nodes Are Associated With Disease Outcome And Patient Survival."** - in "**The Role of Lacteal Integrity** and junction transformation in obesity", Frontiers in Endocrinology, November 2022.

The Critical Role of Lipid Metabolism in Health and Diseases

Lipids

“Lipids make up 10–20% of the human body, and serve as Crucial Energy Storage substances as well as essential components of cell membranes.

Physiologically, lipids are involved in regulating cellular structure and function, signaling pathways.

Free Fatty Acids

Excess systemic Free Fatty Acids (FFAs) - are lipid molecules unattached to other compounds -, and Dietary Lipids (fats) - are macronutrients essential for energy production, cell membrane structure, and hormone synthesis - enter cells within non-adipose organs such as the liver, muscle, pancreas, and placenta, where they are deposited as ectopic fat, generating lipotoxicity.

Chronic Nutritional Excess

Chronic Nutritional Excess (overnutrition occurs when the intake of calories and nutrients consistently exceeds the body's metabolic demands), can lead to the accumulation of lipid metabolites, such as diacylglycerols, ceramides, and free fatty acids, which exacerbate lipid deposition and result in the onset of type 2 diabetes mellitus. Therefore, abnormal levels or the dysregulated accumulation of lipids within tissues are often associated with various diseases, including obesity, type 2 diabetes, non-alcoholic fatty liver disease, neurodegenerative diseases, infections, and cancer.

Maintaining normal levels of lipid metabolism is crucial for overall health.

This Special Issue of Nutrients, entitled “Dietary Lipid, Adipose Tissue and Lipid Metabolism in Health and Diseases”, aims to highlight **the significance of lipid metabolism in human health and disease.**

It seeks to elucidate the regulatory roles of key tissues and organs, including the intestine, liver, adipose tissue, muscle, pancreas, and placenta, in maintaining whole-body homeostasis.

Lipids are typically closely associated with clinical manifestations, and some can even directly reflect the clinical conditions.

In this Special Issue, we present several studies **focusing on dysregulated lipid levels that contribute to the exacerbation of pathological conditions.**

Elucidating the associated relationships and uncovering causal links in lipid metabolism are crucial for the effective targeting of adipose metabolism to improve human health.” - in **“The Critical Role of Lipid Metabolism in Health and Diseases”**, Nutrients, 23 December 2024.

Nutrient Overload

"The Onset of Multiple Types of Diseases Occur Due To Consuming Too Much Food. The prevalence of Obesity was 13%, and Overweight was 39% (total of 52% of the Population) worldwide in 2016.

Obesity-related metabolic diseases, including cardiovascular diseases, atherosclerosis, insulin resistance and type II diabetes, even certain types of cancer, are the leading causes of preventable and premature death.

Modern Diet Pattern and Physical Inactivity

> *"Nutrient Overload occurs worldwide as a consequence of the Modern Diet Pattern and the Physical Inactivity that sometimes accompanies it. Overnutrition-induced changes in key organelles and sensors rewire cellular bioenergetic pathways and facilitate the shift of the metabolic state toward biosynthesis, thereby leading to the onset of various metabolic disorders, which are essentially the downstream manifestations of a misbalanced metabolic equilibrium." - in "Impact of nutrient overload on metabolic homeostasis", Nutrition Reviews, September 2018*

Understanding how Nutrient Overload affects human metabolism on a cellular level provides additional insights in the prevention and treatment of these diseases.

Metabolic Diseases Are Preventable

It is important to note that Metabolic Diseases Are Preventable, as Cardiovascular Diseases and Obesity can be prevented by Eating a Healthy Diet, which also are inherently micronutrient rich.

Therefore, these foods (Functional Foods and Nutraceuticals) may be as pre-emptive or preventative solution against various metabolic stressors." - in "Chronic nutrition overtake can lead to the onset of multiple diseases", Nutrition Reviews, 19 November 2018.

Inflammatory Bowel Diseases And Metabolic Disorders

"Inflammatory Bowel Diseases and Metabolic Disorders are increasingly recognized as interconnected conditions that frequently coexist and influence each other's clinical course.

Accumulating evidence indicates that patients with Inflammatory Bowel Disease face a substantial burden of obesity, metabolic syndrome, metabolic dysfunction-associated steatotic liver disease, osteoporosis, and Diabetes Type II.

These Associations appear to be driven by Shared and Interacting Mechanisms, including:

1. **Intestinal Barrier Disruption.**
2. **Gut Microbiota Dysbiosis.**
3. **Chronic Systemic Inflammation.**
4. **Adipose tissue-mediated immunometabolic pathways.**

Bone Loss in Inflammatory Bowel Disease appears to result from a complex interplay of cytokine-driven bone resorption, impaired bone formation, and Nutritional Deficiencies. Malabsorption and Nutritional Deficiencies Substantially Contribute to Inflammatory Bowel Disease-associated Osteoporosis.

Vitamin D Deficiency is highly prevalent and may promote bone loss through Reduced Calcium Absorption, impaired osteoblast function, and loss of its immunomodulatory effects.

Dietary and environmental factors have been suggested as potential modulators of immunometabolic interactions, **acting via changes in Microbiota Composition, Epithelial Barrier Function, and immune and metabolic signaling networks.**

Urban living has been associated with higher Exposure to Pollutants and Reduced Microbial Diversity, which correlates with increased risk of both Inflammatory Bowel Diseases and Metabolic Disorders through mechanisms involving chronic low-grade inflammation and immune dysregulation.

Pharmaceutical Antibiotic exposure Disrupt Microbial Diversity, favouring pathogenic bacteria and reducing protective species, leading to Dysbiosis, which is implicated in both Inflammatory Bowel Disease, and Metabolic Syndrome.

Physical Activity has been inversely Associated with the development and progression of both Inflammatory Bowel Disease and metabolic disorders. The protective effect appears to be mediated through multiple interacting mechanisms, including attenuation of systemic inflammation, favorable modulation of the gut microbiota, improvement of metabolic parameters, and enhancement of intestinal barrier integrity.

In Inflammatory Bowel Disease, moderate-to-vigorous physical activity has been linked to reduced incident disease risk.

Metabolic Abnormalities and Intestinal Inflammation share common pathways involving gut barrier dysfunction, microbiota alterations, immune activation, and adipose tissue-driven meta-inflammation.

These overlapping mechanisms help explain the increased burden of Obesity, Metabolic Syndrome, Steatotic Liver Disease, Osteoporosis, and Type 2 Diabetes observed in patients with Inflammatory Bowel Disease." - in "Metabolic Disorders and Inflammatory Bowel Diseases: Unraveling Shared Pathways and Clinical Interactions. Metabolites", 9 March 2026.

Inflammatory Bowel Syndrome and Abnormal Intestinal Metabolism

> *"**When I think of Inflammatory Bowel Syndrome (IBS), and Abnormal Intestinal Metabolism (highly bidirectional).** I increasingly blame NETosis (overproduction or impaired clearance of Neutrophil Extracellular Traps (NETs) - a web-like structures composed of Histones, and antimicrobial proteins released by **Neutrophils [the most abundant type of white blood cell] during an immune response) dysregulation (exacerbated NETosis induction and impaired Neutrophil extracellular trap clearance) in response to pathogenic infections and/or other Toxic Triggers, including Poor-Quality Nutrition High in Sugar and Other Toxic Additives.** We also need better Treatments to help protect the Gut Lining, and Vasculature (the complex network of blood or lymph vessels in an organ or the entire body; includes arteries, veins, capillaries, and is responsible for transporting oxygen and nutrients to tissues, removing waste, and supporting immune function) from chronic NETosis dysregulation due to Septicemia, and other Comorbid Causes, such as diabetes." - Jim Hoffman, in "LinkedIn", February 2026.*

> *"The exploration of Neutrophil extracellular traps have expanded from in vitro observation to in vivo organ level, and engaged in many specific disease areas, such as systemic lupus erythematosus, vasculitis, diabetes, thrombosis, and lung injury Recent studies have found that **Neutrophil Extracellular Traps (NETs) Were Related To Intestinal Diseases."** - in "The emerging role of neutrophilic extracellular traps in intestinal disease", Gut Pathog., 22 June 2022.*

"Neutrophils are the most abundant immune cells and the fastest recruitment cells in infected or inflammatory sites, so they constitute the first line of immune defense of the human body. They have a variety of immune functions, including phagocytosis, production of Reactive Oxygen Species (ROS unstable, Oxygen-containing molecules that easily react with other molecules in a cell), degranulation and formation of Neutrophil Extracellular Traps. Neutrophil Extracellular Traps have been originally described as the host defense mechanism that used to capture or kill pathogenic microorganisms for neutrophils.

Neutrophil Extracellular Traps and Sepsis

> ***"We have known that Ischemic Stroke leaves patients dangerously vulnerable to infection, one of the leading causes of death in the weeks after the event. Why does the immune system go quiet after a stroke? The answer may be floating in the blood."** - Biotech Support Group, in **"Immune System Goes Quiet After Stroke Due to Lipids in Blood"**, LinkedIn, June 2026.*

In the development of Sepsis, Neutrophils (white blood cells) migrate from circulating blood to infected tissues and mediate the formation of Neutrophil Extracellular Traps (which kill pathogens).

Neutrophil Elastase

Neutrophil Elastase (NE) is a powerful serine protease enzyme stored in the granules of Neutrophils). Its primary function is to break down foreign proteins, destroy bacterial cell walls, and remodel tissues to fight infections.

Neutrophil Extracellular Traps and Intestinal Ischemia Reperfusion Injury

Intestinal Ischemia Reperfusion injury is a phenomenon in which intestinal injury is aggravated by restoration of blood flow based on Intestinal Ischemia (occurs when blood flow to the intestines slows or stops, often due to blocked or narrowed artery; this Deprives the Tissue of Oxygen, and can cause permanent bowel damage, severe, sudden abdominal pain is the hallmark symptom) from various causes, and even irreversible injury occurs, often after shock, trauma, acute Intestinal ischemia and intestinal transplantation.

Following clinical occurrence of Intestinal Ischemia / Reperfusion Injury, it often Gives Rise to Intestinal Bacterial Translocation, endotoxin emigration, and massive release of inflammatory cytokines leading to liver, kidney, lung, and other multi-organ damage, which in turn causes systemic inflammatory response, systemic multi-organ dysfunction syndrome, multi-organ and tissue failure, and even death. Recently, an increasing number of reports have proved that the gut commensal microbiota serves an essential role in mitigating organismal injury in acute mesenteric ischemia. Regarding the additional link between the formation of Neutrophil Extracellular Traps and Gut Microbes, a study by Liang et al. in 2019 revealed that oral administration of Staphylococcal nuclease (SNase), was capable of effectively degrading Neutrophil Extracellular Traps in vitro and in vivo, **thereby improving Intestinal Barrier Function.**

More importantly, Staphylococcal nuclease alleviated the intestinal inflammatory microenvironment and averted the development of Diabetes Type I, in Non-Obese Diabetic mice by altering the species richness and composition of the intestinal microbiota of Non-Obese Diabetic mice." - in "The emerging role of neutrophilic extracellular traps in intestinal disease", Gut Pathog., 22 June 2022.

Neutrophils (White Blood Cells)

Neutrophils help the immune system fight infections and heal injuries. Neutrophils are the most abundant type of White Blood Cell in the human body and serve as the immune system's first line of defence.

Neutrophils circulate in the bloodstream, rapidly rushing to sites of infection or injury to capture and destroy invading bacteria and fungi.

"Neutrophils are the first line of defence of the immune system against infection. Among their weaponry, they have the ability to mix and extrude bactericidal molecules creating NET-like structures in a unique type of cell death called NETosis. This process is important in order to control extracellular infections limiting collateral damage. Its aberrant function has been implicated in several human diseases including Sepsis, and Autoimmune Disease

(N)ETosis

Polisegmented granular cells are the immune system's first line of defense against infections. They have been considered short-lived cells with unspecific functions of phagocytosis, granular secretion, and the production of Reactive Oxygen Species (ROS). This knowledge has been challenged by several lines of evidence, including the formation of Extracellular Traps (ET), a defense mechanism consisting of the extrusion of intracellular material in the form of Neutrophils Extracellular Traps (NETs) to the surrounding extracellular medium in order to concentrate antibacterial substances and snare invading microorganisms; such a process is often accompanied by cell death.

Human neutrophils constitute the first line of defense of innate cellular immunity. **As the most abundant subtype of Leucocytes in peripheral blood, they constitute approximately 70% of these cells. They are terminally differentiated cells with a life span of 12 to 15 hours, whom after this time period undergo apoptosis: this life span can be extended after exposition to several substances like cytokines."** - in "NETosis", Autoimmune Dis., 2013.

Lipid Metabolism in Homeostasis And Disease

"Lipid Metabolism is essential for maintaining cellular homeostasis, and its dysregulation is linked to various diseases, including:

Cancer; Cardiovascular Disease; Diabetes.

Immune cells, such as macrophages, T cells, B cells, and neutrophils, rely on lipid metabolism for their function, which impacts both innate and adaptive immune responses. **Understanding how lipid metabolism influences immune cells is crucial. Lipids, including Fatty Acids (FAs), cholesterol, phospholipids, and triglycerides, are essential for maintaining physiological functions,** such as energy storage, membrane structure, and cell signaling.

Lipid Metabolism, which involves the synthesis and degradation of lipids, plays a Vital Role in Cellular Homeostasis, and disruptions in lipid metabolism are associated with various pathological conditions. Recent research has highlighted lipids as key regulators of cellular function, particularly in immune cells, where lipid metabolism affects immune responses, cell phenotypes, metabolic pathways, and cytokine levels. **This influence can profoundly affect their functions under both healthy and disease conditions.**

Lipid Metabolism in Cancer

Tumors undergo metabolic transformations that enable unchecked proliferation and gradual spread throughout the body, endangering human health. Abnormal lipid metabolism influences cancer progression, as increased synthesis or uptake of lipids accelerates the rapid proliferation and metastasis of cancer cells.

Lipid Metabolism in Neurodegenerative Diseases

Neurodevelopmental Disorders or Neurodegenerative Diseases are increasingly acknowledged as significant contributors to morbidity and mortality. Abnormal Lipid Metabolism can affect normal brain development and function, as well as the survival, function, and communication of nerve cells, thereby promoting or exacerbating the development of Neurodevelopmental Disorders or Neurodegenerative Diseases, suggesting the importance of lipids and their metabolites in Neurodevelopmental Disorders or Neurodegenerative Diseases. Alzheimer's Disease, and Parkinson's Disease are influenced by Short-Chain Fatty Acids (SCFAs), which can affect psychological functions, including emotions and cognitive processes, by crossing the Blood–Brain Barrier and influencing brain metabolism. DHA (Docosahexaenoic Acid is an essential omega-3 fatty acid crucial for brain health, eye development, and heart function, it is highly concentrated in the human brain and retinas) provides neuroprotection by reducing Aβ deposition in Alzheimer's Disease mouse models.

Dietary administration of Docosahexaenoic Acid can lower lipid peroxides and Reactive Oxygen Species (ROS) in cortical hippocampal tissues, improving cognitive impairments.

Disruption of Cholesterol Metabolism in the Brain Is Correlated with Neurodevelopmental Disorders or Neurodegenerative Diseases.

The Brain (which contains approximately 25% of the body's total Cholesterol), Primarily Stores Cholesterol in the myelin sheath, astrocytes, and neuronal cell membranes. Brain Cholesterol is believed to be crucial for maintaining cell morphology, neuronal transmission, and synaptic formation.

Lipid Metabolism in Cardiovascular Diseases

Cardiovascular Diseases are major contributors to global morbidity and mortality, with atherosclerosis-induced ischemic heart disease and stroke being the primary causes of death. Lipid Metabolism products play a key role in Cardiovascular disease, as they mediate immune responses and affect the functionality of leukocytes, blood vessels, and heart cells, thus influencing the vasculature and heart. **Therefore, understanding the function and mechanism of lipid metabolism in the pathogenesis of Cardiovascular Diseases.**

Lipid Metabolism in Aging

Aging is characterized by **systemic chronic inflammation accompanied by cellular aging, immunosenescence, organ dysfunction, and age-related diseases.**

Numerous pathways regulating lifespan have been identified. Notably, many of these regulatory pathways are associated with lipid metabolism. Lipids also function as signaling molecules that actively modulate Lifespan and Healthspan.

Metabolic Disorders

Metabolic Disorders are a group of diseases caused by abnormal metabolic processes within the body, including obesity, metabolic syndrome, and fatty liver disease. Fatty liver disease is driven primarily by excessive lipid accumulation. Metabolic Dysfunction-Associated Steatotic Liver Disease, previously known as Nonalcoholic Fatty Liver Disease, affects approximately 25% of the global population. **The pathogenesis of Metabolic Dysfunction-Associated Steatotic Liver Disease involves various metabolic disturbances, including lipid metabolism disorders, insulin resistance, obesity, and metabolic syndrome, which promote inflammation in the liver and increase the risk of cirrhosis and hepatocellular carcinoma.**

Conclusion

Most diseases, such as: autoimmune diseases, cancer, and obesity, are associated with abnormalities in lipid metabolism.

Lipid metabolic profiles can reveal specific metabolic patterns that are closely related to the clinical manifestations of the disease.

Lipid Metabolism and signaling within immune cells constitute a fundamental regulatory axis that orchestrates immune homeostasis, significantly influencing physiological responses and disease pathogenesis.

Another significant revelation is the complex interaction between host lipid metabolism and microbiome-derived metabolites.

Gut Microbiota-generated Short-chain fatty acids, and Bile Acid derivatives continuously reshape hepatic lipid synthesis and systemic immunometabolic circuits (Restoring the Intestinal Bile Acid Pool requires repairing the complex Gut-Liver Axis. This relies on restoring the specific microbiome populations that metabolize and recycle primary bile acids into secondary bile acids.

It is achieved by targeting 3 main pathways:

1. Promoting Bacterial Diversity.
2. Accelerating Mucosal Healing.
3. Optimising Enterohepatic Circulation).” - in “Lipid Metabolism in Homeostasis and Disease”, Signal Transduction and Targeted Therapy, 16 February 2026.

Bile Acid Flow

"Bile Acid Malabsorption or Bile Acid Diarrhea; complicates more than 30% of Crohn's Disease. Bile Acids are hepatocyte-derived steroidal molecules essential for lipid emulsification and metabolic signaling. After hepatic conjugation, Bile Acids enter the Duodenum where 95% Undergo Efficient Ileal Reabsorption via the Enterohepatic Circulation. The residual Bile Acid flow into the colon, undergoing microbial biotransformation including deconjugation, dehydrogenation, and dihydroxylation to generate secondary Bile Acids such as Deoxycholic Acid and Lithocholic Acid. This microbial processing is critical for Bile Acid pool homeostasis and receptor-mediated signaling. In Inflammatory Bowel Disease, which encompasses Crohn's Disease and Ulcerative Colitis, ileal even ileocolonic inflammation or resection, and backwash ileitis disrupt Bile Acid reabsorption, leading to excessive colonic Bile Acid influx.

Reconstruction of Gut Microbiota

The Reconstruction of Gut Microbiota and Relative Metabolism through Fecal Microbiota Transplantation can Bring Benefit to Many Diseases categorized into 8 domains in clinical practice, including:

1. **Gastrointestinal Disorders.**
2. **Infections.**
3. **Metabolic Disorders.**
4. **Microbiota-Gut-Liver Axis.**
5. **Microbiota-Gut Brain Axis.**
6. **Oncology (Cancer).**
7. **Hematological Disorders (conditions that affect the blood, bone marrow, spleen, or lymphatic system), and other diseases such as;**
8. **Chronic Obstructive Pulmonary Disease.**

We found that in Bile Acid Malabsorption group, the long-term efficacy of Fecal Microbiota Transplantation was more obvious, with a sustained higher rate of clinical response (66.67%) and clinical remission (52.38%) even 3 months after Fecal Microbiota Transplantation. Importantly, the intervention with Fecal Microbiota Transplantation from healthy donors demonstrated a Remarkable Reversal of the Bile Acid-induced exacerbation of colitis.

The improved histopathological and colonoscopic outcomes following Fecal Microbiota Transplantation suggested that the Gut Microbiota Plays a Crucial Role in Mitigating the Inflammatory Primary Bile Acids (such as cholic acid and chenodeoxycholic acid) shifts the gut environment, altering signaling pathways." - in "Fecal Microbiota Transplantation improves bile acid malabsorption in patients with inflammatory bowel disease: results of microbiota and metabolites from two cohort studies", BMC Med., 1 September 2025.

Intestine Organization and Function

"The Intestine Performs A Vital Function In Absorbing Nutrients, and Conducting Immuno-Surveillance of the Gut Bacteria.

Many publications; have detailed the Influence of Intestinal Microbiota on Body Homeostasis and Diseases.

Food absorption and the intestinal microbial and food antigen burden has probably resulted in stromal adaptation, including development of specialized fibroblasts and blood endothelial cells, and **the evolution of gut immune cells to maintain tolerance and control infection.**

In mammals and birds, **the small intestine is covered by finger-like villi that protrude into the lumen.**

The colon, where villi are absent and there is a flat luminal surface, is the site for liquid absorption from faeces and also harbours the majority of commensal bacteria, which are essential for human health.

Intestinal crypts, embedded in the submucosa between villi, contain intestinal stem cells and transit-amplifying cells that maintain the epithelium by providing cells to continuously migrate in an escalator-like fashion from the crypt to the villus tip.

Intestinal stem cells also give rise to all differentiated cells including: enterocytes, responsible for nutrient absorption; Paneth cells, important for antimicrobial defense; mucus-producing goblet cells; and enteroendocrine cells, which secrete hormones.

The intestinal lamina propria, which underlies epithelial cells, contains scaffold-forming connective tissue and comprises blood and lymphatic vessels, enteric nerves, as well as fibroblasts and smooth muscle cells (SMCs).

The lamina propria is densely packed with immune cells, making the intestine one of the largest immunological organs in the body.

The intestine also incorporates organized gut-associated lymphoid tissue, comprising Peyer's Patches, aggregates of lymphoid follicles and isolated lymphoid follicles (cryptopatches).

A thin layer of smooth muscle, the muscularis mucosae, separates the mucosa from the dense connective tissue of the submucosa, which contains a network of blood and lymphatic vessels and a plexus of parasympathetic nerves.

Two muscle layers, consisting of either circular or longitudinally aligned SMCs, line the submucosa.

The outer layer of the intestine, the serosa, is composed of loose connective tissue and covered by mesothelial cells.

The serosa is continuous with the mesentery, a thin membrane supporting the intestine, and the peritoneum.

Lymphatic Vessel Organization

The lymphatic vasculature is a one-way drainage system for interstitial fluids and immune cells, organized into a network of capillaries and collecting vessels.

Interstitial fluid drains into blind-ended, permeable lymphatic capillaries forming lymph; lymphatic collecting vessels transport lymph through Lymph Nodes to the thoracic duct, and back into blood circulation.

Capillary Lymphatic Endothelial Cells (LECs), are connected by discontinuous cell–cell button junctions that form flap valves promoting one-way entrance of lymph and cells into the capillaries.

Lymphatic capillaries lack mural cells (SMCs and pericytes), but are attached to the extracellular matrix by anchoring filaments.

Unlike capillaries, lymphatic collecting vessels are much less permeable due to continuous cell–cell zipper junctions junctions, and are covered by SMCs, which pump collecting vessels for lymph transport.

They also contain numerous intraluminal lymphatic valves, which prevent lymph backflow.

Intestinal Lymphatic Organization

The Crucial Role of Intestinal Lymphatic Vessels has been illustrated by studies of mice expressing the diphtheria toxin receptor under control of the Lymphatic Vessel Endothelial Hyaluronic Acid Receptor 1 (Lyve1) promoter.

Although lymphatic capillaries of all tissues express LYVE1, diphtheria toxin administration selectively ablated only intestinal and Lymph Node lymphatics within 24 hours.

Loss of Intestinal Lymphatics resulted in Severe Gut Inflammation, Sepsis and 100% lethality by 60 hours, Highlighting an Outstanding Role of Intestinal Lymphatics." - in "Intestinal lymphatic vasculature: Structure, mechanisms and functions", Nature Reviews Gastroenterology & Hepatology, June 2017.

"Lymphatic vessels contribute to the function of the lymphatic system in the mammalian body. The distinct structure at the cellular level allows lymphatic vessels to absorb the Interstitial Fluid (Lymph) in peripheral organs and to drain lymph to the blood circulation.

Lymphatic vessels play an essential role in promoting active immune surveillance in conjunction with Lymph Nodes.

New lymphatic vessel growth (called lymphangiogenesis) is induced in several pathological conditions such as chronic inflammation or tumor progression.

Emerging evidence from experimental animal models shows that lymphatic transport is impaired in chronic inflammation.

Tumor associated lymphangiogenesis promotes enhanced metastasis to draining Lymph Nodes and beyond in experimental tumor models.

Blood and Lymphatic Vessels in the Skin

Blood flow, the major circulation in the mammalian body, delivers Oxygen, Nutrients, and Cells to the Peripheral Organs. In the Skin, Blood Vessels underlie the Epidermis that represents a shield for the whole body.

Conversely, lymphatic vessels absorb interstitial tissue fluid and macromolecules that arise from the epidermal cells in physiological conditions and further play a key role in promoting immune cell responses in pathological conditions such as inflammation and tumor progression." - in "Lymphatics in nanophysiology", Advanced Drug Delivery Reviews, 30 July 2014.

Sepsis may gain admission by means of the blood and lymphatics.

Septic foci, such as are found in Carious Teeth or Intestinal Toxaemia, are a source of infection.

A Pure Mind In A Pure Body, That Is Health

"The Antiseptic Treatment, with Carbon and other remedial means, for the cure of incipient Consumption, Indigestion and Nervousness.

The Foundation Causes of which are often laid in Early Life.

In the following diseases, as well as in many other cases, the Antiseptic Treatment has proved itself, wonderfully curative in Asthma of the worst form, in aged people and others; in Chronic Diarrhoea of 1, 2, 5, and 10 years standing, Ulcerations of the Stomach, Uterus, Intestines and Liver.

In Liver Complaints and Jaundice, it improves the complexion, rendering it white and clear; in Cutaneous Disorders; a restorative and an invigorator to Children, Purifying the Stomach and Intestines, removing Worms — preventing their formation.

The above, and other advantages are attendant upon this treatment, proved by the author's experience.

This treatment has no injurious effects, but is harmless and healing to the most delicate constitutions.

In Leviticus, washing the body is commanded in certain impure conditions.

Water, duly administered, is a Healing Medium, the law of which is eternally established in nature, and was ordered by God for the health of the body, and was enjoined to be administered in certain unhealthy, unholy conditions of man.

No one can treat disease successfully unless he understands the spiritual and moral causes which may have contributed to bring about the state of ill-health of the sufferer, as well as the physical causes, which have added their share.

If wise, he feeds on wholesome diet.

The most effectual remedy for impure breath, and a disordered and putrid state of the stomach, is my antiseptic treatment of carbon, with other anti-putrescent means and conditions.

The Value of Proper Food is but little understood.

The Food, being the fuel, should all be consumed by the Oxygen of the air, which causes its combustion; that which is not thus consumed, ferments or decays, and increases any diseased action which may be in the body.

Carbon will arrest the putrescent conditions.

Disease Is Likewise A State of Decay.

By the same Antiseptic Action Disease is arrested, for Disease Is Not a Part of the Living Organism, but is a departure from it.

To Cure It, You Must Arrest the Decay.

If the Cause be Diseased Action, You Must Change That Action.

If excitement, irritation or wounded sensibility, or if cold is the cause of disease, It Must Be Cured By Removing The Cause, and the Vital Principle Will Heal, and Build Up the irritated parts.

If we inquire and investigate the cause of the disease in man, we invariably find its constitutional origin is in the violation of law; the law of Nature and the law of God in the Scriptures, which is a law given by God to man.

The Law of Nature is the law of instinct followed by the animal creation; but society neglects to observe both of these." - Dr W. Evans, MD, in "A Pure Mind in a Pure Body, that is Health", 1863.

Chapter 13

Sound in Reviving Blood Cells

"Pythagoras said that Music could be used in place of medicine.

It got my attention, and I thought, there must be some experiments that could be conducted, where we can carefully measure the response of music to some sort of healing situation. The first experiment that I conceived of was using blood. You take a vial of blood and you place it into an incubator with a small loudspeaker in the incubator, that's feeding music to that blood at the same time that that's happening. We have another vial of the same blood we have a Faraday Cage which is electromagnetically screened, but it's also a very very quiet environment. So that blood is not receiving any music, it's just receiving quiet.

We go through a protocol that first dilutes the blood, by a certain ratio with a buffer solution, and then we extract a small amount of that mixed blood, when we put that blood into the cell counter it will tell us how many cells are actually alive, and what the term is viable.

The cells in the Faraday Cage, have not fared very well, at all, mostly dead.

I hope you can see this, dilute the sample, more cells alive than the cell counter can count. That's a huge difference between the music, and the quiet.

Cells that are transiting towards being dead, have been actually re-enlivened to the extent that so many of them are now alive, really wonderful an amazing result, absolutely amazing. When we have a heartbeat, it creates a pressure wave, and that allows the hemoglobin molecules take in some oxygen from the blood. The low frequencies from the human voice, create the similar sort of pressure waves that allows the blood to uptake the oxygen." - Dr John Stuart Reid, Acoustic Physics Researcher, in "The 1 Field", 2019.

> ***"Documented evidence shows the Power of Music, can be tapped to Heal the Body, Strengthen the Mind, and Unlock the Creative Spirit. Published papers and journal articles offer dramatic accounts of how doctors, musicians, and healthcare professionals use Music to deal with everything from: Anxiety to Cancer, High Blood Pressure, Chronic Pain, Dyslexia, and even Mental Illness. During Childbirth, Music can relieve expectant mothers anxiety and help release endorphins, the body's natural painkillers, and thereby dramatically decrease the need for Anaesthesia. Exposure to sound, Music, and other acoustical vibrations can have a lifelong effect on health, learning, and behaviour, for such exposure stimulates Learning and Memory*** *and strengthens one's listening abilities." - in "Music Therapy", The Fountain Magazine, 1 October 2002.*

The 4 Postulated Laws of Cymatics

> *John Stuart Reid, in his 4 Postulated Laws of Cymatics (the study of visible sound & vibration, where sound frequencies cause patterns to form in mediums like sand, liquids, on vibrating surfaces, revealing geometric shapes of sound waves), he explains, how they play out in the biological processes at work on our body.*

"One of the facts about Cymatics, is that all when we are immersed in an environment of sound, and of course we're always in s sound, there's never a time when we're not in sound, but let's say musical sound, then all those musical sounds are literally imprinting on every cellular membrane in our body, every cell has a membrane, and the Cymatics Principle, is that whenever you have Sound, and you have a membrane, there has to be a Cymatic Pattern invisible, to the unaided eye but nevertheless present.

> *"The holographic principle is a mathematical principle that the total information contained in a volume of space corresponds to an equal amount of information contained on the boundary of that space." - Andrew Zimmerman Jones, describes the Holographic Principle*

Every atom, and molecule in the sound, carries all of the vibrational Energy Information of the originating sound, and this fact tends to be overlooked when the wavelength of sounds in relation to human tissues is concerned.

The Sonic frequency is imparted to Atomic and Molecular particles in any Body of Water, or holographic, or let's say quasi-holographic in nature, and this brings us to the 1st Postulated Law of Cymatics. In a dynamic Cymatic pattern, in Water or other fluid media the frequency information contained in every atom or molecule is identical, and interpreting this importance of this law in terms of our Water rich biology, when Sound enters our Body, it means that every Atom and Molecule of the Sound, carries all of the Energy Information thus communicating the Sonic information to all aspects of our physiology, even down to the microscopic and submicroscopic scale.

1st Law of Cymatics: In a dynamic cymatic pattern, the frequency information contained in every atom or molecule is identical.

Interpreting the importance of this law in terms of our biology, when Sound enters our body, every atom and molecule of the sound carries all of the energy information, thus communicating the sonic data to all aspects of our physiology, even down to the microscopic, and sub microscopic scale.

2nd Law of Cymatics: A fluid membrane compresses incident sonic periodicities in a ratio governed by the relative densities of the sonic and fluid mediums.

Interpreting the importance of this law in terms of our biology, all the Sounds that enter our body from the environment, are compressed in the 829:1 ratio when they enter the Body's:

a. Interstitial Fluids
b. Fascia
c. Organs
d. Cells
e. Bones

3rd Law of Cymatics: Cymatic patterns on a circular membrane represent an encoded model of the sound since the crests the waves at the moment before Faraday instability are in phase with the crests of the initiating sound."

Interpreting this law in terms of our biology, Cyma-Glyphs are literal geometric models of a therapeutic sound, and therefore can be used as a therapeutic tool.

4th Law of Cymatics: Normal modes of vibration for a given membrane are limited in number, while 'special' modes of vibration for the same membrane are unlimited.

Interpreting this law in terms of our biology, it means that all our tissues receive a constant stream of ever-changing Cymatic Patterns when we are immersed in a musical environment." – Dr John Stuart Reid, Acoustic Physics Researcher, in "Water Conference 2024 on the Physics, Chemistry, and Biology of Water", Lisbon, Portugal, 18 October 2024.

The Medical Trade So-called "Genetic Theory of Disease", Down The Drain

This information Furthermore Confirms That:

The Medical Trade is the "De Facto", the most, Nonsensical, Farcical & Laughable Pseudoscience in existence today.

"I ended up teaching in a Medical School, and I was teaching the conventional science of genes control your life, and this is an experiment that I did, that changed my whole life.

I have 50,000 genetically identical cells in a petri dish.

All the cells came from the same parent.

I split the cells into 3 different petri dishes.

I changed the environment, and each of the dishes in environment A the cells: form Muscle.

In environment B the cells: form Bone.

In environment C the cells: form Fat Cells.

Now you're left with a question:

What controls the fate of the cells?

And the answer is not the genes, they were all exactly the same.

The only thing that was different was the environment.

When I tried to show my experiments my colleagues, they looked at it, and said it's not real.

I left the system, I knew I was teaching the wrong information that genes do not control things.

Isaac Newton didn't put God or invisible forces or Spirit, he just measured physical things, so the body being a part of a mechanical universe is a machine.

Say well, how the machine works, take it apart study the pieces.

So they were taking apart the body, they found there were cells, and then they took the cells apart, and they found that cells are made out of protein.

And the question is who makes proteins?

It was in 1944 the first study revealed that, if you took DNA from one species, and put it into a bacterial culture of a different species the bacteria culture start to resemble the bacteria where the DNA came from.

So then they say the DNA makes a protein the next question is who makes the DNA?

Well this is where science got screwed up.

DNA is a double helix, in an experiment they separated the double helix, so I have 2 single helices and they put those into a solution of building blocks and they pulled it out, and it was a double helix again.

The answer is clear DNA makes itself.

And DNA makes the proteins the end of the search.

Once they found the DNA was important they threw away the protein well they threw out the control the control was in the protein and proteins respond to environmental signals.

People say, you're studying cells in a plastic petri dish what does that have to do with me.

It doesn't make a difference to the cell if it's in a plastic dish, or a skin dish.

It still responds to environmental signals.

So the environment is controlling the cells.

But between the environment and the cells, is the mind and that does interpretation. If you open your eyes, and see someone you love, your mind interprets love, and you release beautiful chemicals, dopamine for pleasure, oxytocin for bonding.

If I take the chemicals from a brain that perceives love, and put them into a plastic petri dish, the cells grow beautifully.

If I take the chemicals, from a brain that perceives fear, the cells stop growing, and they start dying.

So, you're the one whose thoughts change the chemistry, and the chemistry controls the genetics.

So, all of a sudden you're not a victim of your genes.

You're the master of your genes." - Dr Bruce Lipton, Professor of Anatomy, in "The 1 Field", 2019.

The State of the Blood
A Major Factor In Aiding Rejuvenation of the Body
Or Establishing Disease

"Until William Harvey made his discovery on the Circulation of the Blood, the modern world was without a fundamental principle upon which to base any attempt to rejuvenate the body.

This knowledge is still so new, that Medical Trade Schools are in darkness on the subject of rejuvenation.

It is now known the blood is a vast transportation system, with many functions. It carries new material to all parts of the body to repair and renew its constantly decaying cells, and carries off for elimination their waste and excretory products.

This recently discovered knowledge proves the River of Living Water Is The Fountain of Youth, by which every part of the body, every hour of its life, is incessantly repaired, renewed, rejuvenated, from the softest cell to the hardest bone. That is Regeneration in every sense of the word.

The great Metchnikoff was jeered by his medical brethren when he answered these questions.

He declared that deterioration of bodily structure and old age are due to minute quantities of poisonous substances in the blood.

His work furnished the first logical explanation in modern times of the degenerative changes that occur in the body, and why.

His findings have been confirmed by research workers, including Dr George W. Crile, Dr James Empringham, and Dr Alexis Carrel.

> ***"There is no natural death.***
> ***All deaths from so-called natural causes are merely the end-point of a progressive acid saturation."*** *- Dr George W. Crile*

> ***"All creatures automatically poison themselves.***
> ***Not Time, but these toxic products (in the blood) produce the senile changes we call old age."*** *- Dr James Empringham*

> ***"The cell is immortal.***
> ***It is merely the fluid in which it floats that degenerates.***
> ***Renew this fluid at proper intervals, and give the cell nourishment upon which to feed, and, so far as we know, the pulsation of life may go on forever.***
> ***Quickly, involuntarily, the thought comes: Why not with man? Why not purge the body of the worn-out fluids, develop a similar technique for renewing them—and so win immortality?"*** *- Dr Alexis Carrel*

Disease is Degeneration

"Carbon-Monoxide: A concentration only two parts in ten thousand will produce the symptoms of headache, mental dullness, muscular fatigue and loss of energy in a few hours. These symptoms in city workers and city dwellers are common and usually disregarded. The victims look to foods and vitamins for relief, not knowing the cause of the trouble. Scientists of the Harvard Laboratories, risking their lives to discover more about carbon monoxide gas, found the average man can endure it only until his blood is one-third saturated. **Scientists agree that city air is a polluted mixture of industrial fumes, such as carbon monoxide, sulphuric acid, hydrochloric acid, nitric acid, hydrocyanic acid, benzene, methane, sulphur, and other dangerous chemicals too numerous to mention.**

In addition to these poisonous industrial fumes, city air is saturated with exhaust gas from motor cars and trucks.

This deadly gas consists of carbon-monoxide, carbon-dioxide, lead-oxide, lead carbonates, free gasoline, and complicated benzine chain compounds of the hydrocarbon series. These substances are deadly poisonous to man.

Only a few grains of hydrocyanic acid produces violent death quickly." - George R. Clements, in "Live Better", 1962.

> ***"Among the more dangerous compounds, nitric acid and sulphuric acid are always present in combustion gases.***
> ***It thus results that in our cities an average of 2,500,000 particles per cubic inch are present."*** *- Professor H. Landsburg, Geophysical Laboratory, Pennsylvania State college*

"The products of combustion also irritate the eyes, ears, nose, throat, the-respiratory tract, the bronchial tubes, and the Castro-intestinal areas.

In the lungs the carbon particles accumulate and become imbedded in the air cells, and in time the lungs change from natural pink to black.

I have performed many autopsies upon New Yorkers, and almost without exception their lungs were as black as night. I could present an impressive list of diseases in which the influence of polluted air is known.

It is in Pneumonia, of the acute disorders, that the influence of polluted air falls most disastrously.

Pneumonia ranks first, in the industrial U.S., in the list of Acute Diseases as a cause of death.

It takes away vigorous adults in the most useful years of their lives." - Dr Thomas Darlington, former Health Commissioner of New York City

"While a diseased heart, liver, kidney, pancreas, stomach, etc., may be regenerated to such extent that it fails to bother its owner, and may give good service for years, such organ cannot again become normal.

That fact is proven by the evidence that a wound, though it heals, yet leaves a scar composed of low grade tissue.

A fatty heart, a fibrous liver, a diseased mucous membrane — these can not return to their normal state. But as the original size of an external scar diminishes with the passage of time, so the diseased organs, by a process of strict living, will continue to improve with the passing of years.

The body, we observe, is struggling against two enemies: the physician without and his poisons within, and the original poisons within, which the body endeavoured to eliminate by accelerating its functions.

Each time that the body was making progress in its work, it received a serious shock at the hands of the physician; and each time this shock occurred, it decreased the body's vitality.

Knowing that the body is a unit, we know, **that the law which governs the whole, governs every part. When any part shows signs of sickness, such as throbbing heart, rapid respiration, rising temperature, and so on (which medical men term and treat as disease,) we should know that the whole is affected.**

More than this, we should know that the cause of the visible signs of sickness is merely the secondary effects of the body's reaction to an internal danger, the primary cause of which is violation of law; and that the reaction has for its sole purpose the purging of the body, by its cleansing forces, of the systemic poisons which constitute the dangerous element.

There is reason and purpose in every function of the body. All its functions are perfect, and are designed to accomplish specific results.

These results have for their object the improvement of the organism.

To "treat" the affected parts (the parts that exhibit the symptoms of "disease"):

Is to Ignore the Purpose of the Body to Thwart its Efforts, and to Force Upon it an Inimical Condition that it was Striving to Cast, Off.

Because we do not understand the body, or its function, or the purpose of its function, does not license any of us, not even "scientists", to assault and attack the body, or any of its parts or functions, with drugs, serums, and knives.

To do so must lead only to permanent injury.

All substances which, when introduced into the body, either by cutaneous injection or absorption, by respiration or by ingestion, cannot be utilized as food by the body economy, are poisonous thereto.

Poisons always force the body to act in self-defense.

If the kind and quantity of poison be insufficient to produce instant death, it produces death by degrees by establishing a condition of chronic poisoning (so-called immunity); a danger to which the body adjusts itself only when it cannot control nor destroy the same.

In the finale, **the destructive agent, which the body was unable to control or destroy, and to which it was forced to yield after its resisting-power was weakened, will compel the body to destroy itself by forcing it continually to act in self-defense, against the ever-present danger, until its Vital Force is exhausted, resulting in a collapse of the nervous system that ultimately brings death.**

Every rational person knows that Exhaustion Kills, even though the body be, in every particular, healthy and vigorous. 2,500 years ago, when the Greeks won the great victory of Marathon, the messenger who brought the news to Athens, ran the entire distance on foot, more than 40 kilometres, and Fell Dead From Exhaustion as he delivered his message.

The machinery of the body functioned so violently and so long, to meet the extraordinary demand made on it, that it simply Collapsed from the Exhaustive Strain.

The More Poisonous any Substance Is, the More Dangerous It Is, and the Quicker and Harder the Body Acts.

Such treatment, instead of its being curative, is destructible: for it is a terrible shock to the nervous system, and may be continued until the body will utterly collapse from the exhaustion induced by its own violent efforts of self-protection.

Every effect is visible, while every cause is invisible.

No power, force, substance, or thing is able to save the body or serve the healing power within, further than to remove the obstruction responsible for its disturbed equilibrium.

In Direct Ratio As The Blood becomes:

Stagnant, Foul, Impure, and Abnormal, will and must All Organs, Tissues, and Cells show a Decline From the Normal - THIS IS DISEASE.

1. The continuous existence of the body depends upon the blood.
2. A normal flow of normal blood brings health.
3. Retarded circulation and foul, impure blood brings disease.
4. Purification of the blood and acceleration of the circulation is scientific treatment.
5. The procedure must be natural; and, being natural, results are and must be favourable and permanent." - George R. Clements, in "Live Better", 1962.

Blood-Poisoning By The Medical Trade Drugs

"Agranulocythaenia (Blood-Poisoning), is a fatal disorder.

It is now known to be caused by Pyramidon, a drug taken and widely prescribed by "specialists," for relieving symptoms derived from elementary errors in the manner of living.

Sir William Wilcox, the eminent English Toxicologist, in the British Medical Journal 2 years ago, discloses that this disastrous disease is caused also by the Salicylates - Drugs universally taken and prescribed by medical men the world over, for the suppression of symptoms they call "Rheumatism."

But such symptoms are no more than commonplace consequences of wrong feeding and general habits - not infrequently, of unhappiness merely.

Agranulocythaenia (Blood-Poisoning) may also be caused, says Sir William, by the Barbiturates (of which **Luminal the great Brain Paralyser,** is the best known), prescribed literally in tons for suppressing nervous symptoms arising from toxic conditions of body and mind.

Also, says Sir William, by "Avertin," used as a basal anaesthetic in surgical operations for cutting out symptoms amenable often to simple natural methods.

Also by Aspirin!

Who dare compute the number of tons of this potent destroyer swallowed annually to relieve the symptoms of stupid living?

One English firm **spent £340,000, in 1 year, in advertisement alone, on 1 particular futile disease-producer.**

And the British Medical Journal continues to draw large sums from advertising, to medical men, the poisons its own columns condemn!

What Sir William Wilcox has yet to discover is, that **Agranulocythaenia is only one of the killing effects of the above named poisons.**

Presently it will dawn on him, to his horror and dismay, that:

1. Deafness.
2. Eczema.

3. Asthma.
4. Blindness.
5. Paralysis.
6. Criminal degeneracy.
7. Delusions.
8. Cancer.
9. Insanity, together with
10. Numerous Other Appalling Adversities

Quite frequently eventuate from a variety of Drugs so comprehensive as to include almost the whole range. These are reckoned already by tens of thousands; and are continually increasing in numbers, futility, and toxicity.

Not long ago, while eulogies appeared of "God's G. men," as a paper was pleased to term us medical men, **a paragraph recorded some hundreds of deaths caused by the latest drug advocated to "cure" "blood-poisoning."** Inept in their ignorance, though anxious enough to aid, **those who prescribe these compounds know practically nothing of their composition, and less of their action, immediate or remote.** Desperate in their helplessness, and beguiled by specious and cunningly worded advertisement, they clutch at the subtle deceptions as a drowning man at a straw; **they impose upon public confidence by prescribing on the say-so of salesmen carefully trained to take advantage of ignorance and credulity. Doctors thus become the agents for destroyers** more frightful than phosgene." - Dr Ulric Williams, MD, in "Hints on Healthy Living", 1939.

> ***"Systematic Studies suggest that many stories about New Medicines tend to overstate benefits, understate risks and costs, and fail to disclose relevant financial ties."***
> ***What's more, "overly rosy coverage of Drugs may also result from the direct and indirect relations between journalists and Drug Companies", that is, the financial ties between the reporters and Big Pharma with all its perks.***
> ***"Another conflict of interest for editors relates to advertising, a major source of income for many journals. Most of the advertising comes from Pharmaceutical Companies."*** *- Dr Michael Greger, MD, 19 September 2019.*

> ***"They also found that press releases about research in medical journals often presented results in exaggerated formats and failed to mention study limitations or funding sources. Overly rosy coverage of drugs may also result from the direct and indirect relations between journalists and drug companies. Some medical reporters undertake work outside their media outlets that is paid for by drug companies, some receive all-expenses-paid international trips from drug companies, and some accept generous medical-media awards sponsored by drug companies — in some cases with company representatives sitting as judges."*** *- in "Making medical journalism healthier", The Lancet, 21 June 2003.*

Medicines Are Poisonous, or Anti-Vital in their Tendency

“In cases of acute disease, the cure is much better effected without medicine than with. But especially where there is no particular disease, only a fear that there may be, **should medicine be avoided as you would avoid a serpent.**

It is poisonous in its nature, always produces evil, and seldom any good.

Taken habitually, it will cause the diseases which it is taken to prevent, or cure. We would discard them all as unnecessary, and depend entirely upon obedience to preserve health and prevent disease.

But if medical treatment is to be resorted to, it seems to us that the Water Cure is the one best adapted to the purpose, and one which produces the least evil of any. In skilful hands, it can be made to answer every purpose, and no bad effects will ever result; or, if ever, at most, very seldom.

No doubt it is destined soon to supersede the use of drugs entirely.

It is almost infinitely to be preferred.

But still it is infinitely better to prevent disease by proper regimen, than to be cured even by Hydropathy. But if a disease is to be cured, Hydropathy against the world, say we.

First; Medicines Are Poisonous, or Anti-Vital in their Tendency.

In Their Effects they are Opposed to Vital Action, and Injurious to the Vital Organism. If received into the vital economy in any quantity, and retained for any length of time, they will destroy life; but the vital organs are endowed with beautiful instincts, by which they are enabled to perceive the presence of any injurious substance. They instantly give the alarm, and the vital powers are at once aroused to energetic, and, if necessary, to convulsive efforts to expel the offending substance. This reaction, so to speak, of the vital powers, or their convulsive efforts to expel an injurious substance from the vital economy, is often so violent as to cause death, even before the direct and proper effects of the poison are hardly perceptible. Now, it is evident that in this energetic and convulsive action of the vital powers, foreign and morbid matter, which was before in the system, producing derangement and disease, might be expelled along with the poison which produced the paroxysm. For instance, suppose the stomach to be loaded with morbid matter which it cannot get rid of, and which obstructs its action, if we take a proper quantity of a substance which will produce a violent reaction in the stomach to expel it, it is evident that the morbid matter may be expelled along with the poison. In this case the medicine, by its direct effect, has produced no cure; but has only removed an obstruction which interfered with the function of an organ, and thus permitted the organ, by its own inherent energies, to remove normal action, and restore the injury previously done. In fact, **the drug being anti-vital in its tendency** (for by this property only did it produce the spasmodic effort), **by means of the violent and unnatural action which it produced in the stomach, has still further weakened and injured that organ, so that it has produced injury rather than benefit.**

However, the morbid matter is removed, and it is frequently worth while to submit to the inevitable evil for the sake of the incidental benefit.

The vital energies may now go to work, and repair, as far as possible, the injury done. Nature is economical of means of expenditure. If the presence of a poisonous or anti-vital substance will not immediately and seriously endanger the welfare of the system, or if it can be removed by means of the natural excretory organs, the vital instincts will not risk the danger and injury of a violent spasmodic effort like vomiting, but the offending cause will pass along, and perhaps be expelled by an instinctive and energetic effort of the bowels.

In purging, the muscular action of the bowels is increased, and also the liquid secretion, in order to dilute and flood away the offending substance, and protect the delicate tissues; but in this operation, any morbid matter which happened to be present would be removed as well as the poison; not only so, but the liquid secretion of the bowels, which was instinctively increased by the means and for the purpose above mentioned, is a natural and constant and important excretion for the removal of waste, and effete, and any foreign matter from the body. If this excretion has been suppressed, and the body become loaded with foreign or morbid matter, which causes disease, then, when it is increased by the action of the drug in the way above mentioned, **this matter would be of course removed, and the system enabled to restore itself.**

In this case there has been no direct benefit produced by the medicine, but on the contrary, the vital energies have been weakened, and the organs injured, by the violent instinctive efforts which they have made to protect themselves.

All the benefit produced is the removal of the morbid matter, so that the system is now at liberty to recover itself by its own powers.

In the same way other anti-vital substances will stimulate the functions of other excretory organs to protect themselves, and remove the poison from the system, and in this way will tend to purify the body, and allow it to regain health by its own recuperative energies; but this process inevitably produces evil, and is only to be tolerated in certain cases for the incidental benefits which occur.

They waste vitality, or the fund of life, weaken the organs, tend to deprave the functions and destroy the natural instincts which warn against danger, and are followed by reaction and torpor of the stimulated functions, which, as a general thing, more than counterbalance any benefit which can possibly be produced.

The more such stimulation is resorted to the less able the organs become to perform their material functions without it. No greater physical calamity can happen to a human being than the production of such a necessity, and the continuation of such a habit of constant drugging. The effects produced are, as we have seen, simply the vital reaction against a poison, or the instinctive efforts of the system to protect and free itself from a drug which would otherwise greatly injure or destroy it. The purpose above mentioned, is a natural and constant and important excretion for the removal of waste, and effete, and any foreign matter from the body." - in "The Organic Laws; Or, the Laws which Govern the Human Organism", 1851.

Blood Red Cells Conquer Pain

"Recently **Red Cells obtained from blood collected at Blood Banks have been used in a new and Remarkably Effective way to Cure Ulcers, Infected Wounds and Bums. The response is prompt. Pain almost immediately disappears.**

Purulent ooze subsides under the protective film. Granulation tissue rapidly develops.

All this means a forward step in the collection and utilization of blood for "banks" now considered indispensable for transfusion both on the battlefield and in civilian life. **Hitherto hospitals and Red Cross stations where blood banks are built up have thrown the Red Cells away.**

Only the plasma is wanted; the amber-colored liquid in which the cells are carried. More than half the blood collected is therefore wasted.

Now that the **Red Cells can be used with astonishing benefits in treating bums, wounds, ulcers and sores**, blood banks are able to do double duty.

The Red Cells brought about Healing where other modes of treatment had failed.

Not only infected or uninfected bums and wounds, some ulcers but even some types of osteomyelitis of the carpus (inflammation of bone-marrow in the wrist) have been beneficially treated with Red Cells." - in "Blood Cells Conquer Pain", Science Digest, May 1943.

Toxaemic Conditions Bring About Destruction of Leucocytes

"A microscopic examination of fresh normal human blood reveals the fact that it consists of a colourless fluid part, the blood-plasma, in which are suspended enormous numbers of non-nucleated circular biconcave discs, the Red Blood Corpuscles or Erythrocytes, and a much smaller number of nucleated more or less amoeboid cells, the White Blood Corpuscles or Leucocytes (white blood cells).

The much smaller blood platelets are usually indiscernible by this method of examination.

In health, whilst the erythrocytes are all uniform in character and appearance, the leucocytes, on the other hand, show many differences among themselves.

Thus they vary in size, in the size and shape of the nucleus, and in the amount and appearance of the cytoplasm, which may be hyaline or finely or coarsely granular.

Hence several varieties can readily be distinguished and recognised.

It is, however, chiefly upon stained preparations of blood films that we rely for the recognition and accurate differentiation of the various kinds of leucocytes.

Normal Human Blood contains the following varieties of leucocyte, together with the percentages they form of the total number of leucocytes:

1. Lymphocytes, large and small (22%).
2. Polymorphonuclear neutrophilous leucocytes (70%).
3. Large hyaline mononuclear leucocytes (4%).
4. Transitional leucocytes (1%).
5. Eosinophilous leucocytes (2.5%).
6. Basophilous leucocytes or “mast-cells” (0.5%).

In certain pathological states there may be an increase or decrease, relative or absolute, of any or all of these varieties of leucocyte, whilst **the blood may also contain abnormal forms of white cells constituting the various types of myelocyer developed from the bone marrow.**

These 2 varieties are the polymorphonuclear neutrophilous leucocyte, and the large hyaline mononuclear leucocyte respectively.

Polymorphonuclear Neutrophilous Leucocytes

Of the various types of leucocyte present in normal human blood, the polymorphonuclear neutrophilous leucocyte is the most abundant.

From 70% to 75%, of all the leucocytes are of this variety. In the various leucocytoses this number is greatly increased, reaching 90%, or upwards.

It is an actively phagocytic body, and on this account was termed “microphage” by Metchnikoff. By the production of a ferment-like body “microcytase”, it digests and destroys bacteria and other substances which have been phacocytosed.

A sufficiently accurate and comprehensive differential polymorphonuclear blood picture may be obtained by classifying these cells according merely to the number of the definite segments of the nucleus without reference to their shape, size, or arrangement.

This method gives 5 classes as follows:

Class I comprises cells with unipartite or undivided nucleus.
Class II cells with bipartite nucleus having 2 segments.
Class III with tripartite nucleus, having 3 segments.
Class IV with quadripartite nucleus, having 4 segments.
Class V with multipartite nucleus, having 5 or more segments.

In health and under normal conditions, segmental neutrophile blood picture is remarkably constant.

In pathological conditions, on the other hand, especially when associated with Toxaemia, this relationship is altered, the amount of alteration being proportional to the Toxaemia present.

This alteration consists in a diminution of the more segmented forms, so that a relative increase of Classes I and II results. This condition Arneth speaks of as “laevo-deviation”, (a turning or deviation to the left), or “dislocation to the left.”

This laevo-deviation in various diseases is readily seen.

> ***"Depending on the degree of Infection or Intoxication, according to the specific effect of the Infecting or Intoxicating agent on blood and marrow, depending on the Nutritional Status, and Resistance of the individual, depending on the presence and transfer of the infectious agents enter the blood or not, depending on the process of any local disease process that may have occurred and its consequences and probably still to come a wide range of all sorts of other factors an infinite series of manifolds and processes, the most prominent of which we have so far identified as hyperleukocytosis and normo[leuko]cytosis, and to single out hypo[leuko]cytosis in particular were used to."*** *- Dr J. Arneth, MD, "Die neutrophilen Leukozyten bei Infektionskrankheiten", Deutsche Med. Wochenschr, 7 January 1904.*

It is in connection with Pulmonary Tuberculosis that I have specially observed this condition, in a series of cases of Pulmonary Tuberculosis, in collaboration with Dr Horace Wilson, I have investigated the condition of the Leucocytes after Arneth's method, very interesting results were obtained. **Arneth considers that Toxaemias bring about the destruction of neutrophile leucocytes, the disintegration affecting particularly the older cells, so that forms possessing the most divided nucleus disappear first from the blood. Hence the neutrophile blood picture may be taken, as An Index of the Severity of the Intoxication.**

That Toxic Substances circulating in the blood actually do bring about the destruction of the neutrophile leucocytes, is proved by examination of the blood in cases of poisoning by Tri-nitro-toluol and allied substances.

Cases of Tri-nitro-toluol poisoning occurred not infrequently in certain classes of munition workers during the Great War, especially among "T.N.T. Fillers." (Trinitrotoluene, is an explosive chemical compound).

In one fatal case in which I made a differential leucocyte count shortly before death, the destruction of the polymorphonuclears was carried to such an extreme degree that none of the well-known varieties of leucocyte could be detected, such leucocytes as were present consisting entirely of badly staining degenerate-looking cells, somewhat resembling abnormal lymphocytes.

This condition of the leucocytes produced a striking picture of the histological appearances of the blood — a peculiarity which I have never encountered in any other condition. These findings are quoted to support Arneth's views that **Toxaemic Conditions Bring About Destruction of the Polymorphonuclear Leucocytes,** but the destructive process had here been carried to such a degree that all the 5 varieties had disappeared alike.It has long been known that an increase in the total number of leucocytes in the blood occurs in the condition known as leucocytosis, and that most commonly this leucocytosis is due to an increase in the number of polymorphonuclears present, the number of the other varieties remaining unchanged.

An increase in the relative percentage of polymorphonuclears thus results.

This total increase in the number of leucocytes, together with an increased relative percentage of polymorphonuclears, **is met with in every sort of Acute Inflammatory Process.**

Thus **in Acute Septic Infections, in Pneumonia, in Erysipelas, in Endocarditis, etc., the Leucocyte Count May Rise to 60,000 per c.mm., or even more, the polymorphonuclears giving a relative percentage of 90% to 95%.**

Certain chemical substances like nucleic acid and yeast also produce a polymorphonuclear leucocytosis, and this fact has been made use of therapeutically where an increase in the number of these cells seemed desirable.

An increase in the amount of phagocytosis can thus be secured, and by obtaining increased phagocytosis, increased destruction of micro-organisms can be brought about. Not only may increased phagocytosis be procured by increasing the number of phagocytic leucocytes, but also by increasing the opsonic content of the body fluids, and by increasing the phagocytic activity of the leucocytes themselves.

Large Hyaline Mononuclear Leucocytes

These are the largest cells present in normal blood, being about 2 or 3 times the diameter of the red blood corpuscle. In them **the Cytoplasm is relatively more abundant than in the Lymphocytes.**" - in "Some Factors in the life history of the Leucocyte", Science Progress, 1923.

> ***"The Leucocytes are able to absorb, not only living bacteria, but soluble substances as well."*** *- in "White Blood Cells in Disease", New York Medical Journal, 24 November 1900.*

The Alkalinity of the Blood
And the Number of the Leucocytes

"Loewit (Allgem. Patholog. des Fiebers, Jena 1896), reports that **in the first stages of artificially produced infectious diseases, he found a considerable rise in the Alkalinity of the Blood:**

> ***"In the experiments reported the increase in the Alkalinity of the Blood appears as a Forerunner of the subsequent decrease, which is in accordance with the views expressed by Loewy and Richter. Here the idea certainly seems to suggest itself that in the increase in the Alkalinity we Have a Protective Measure or counter-reaction of the Diseased Organism Against the Cause of the Disease and its Effects."***

Later on, Loewit, in an experimental study (Zeigler's Beitrfige, 1897), enters into the question of **the relations between the amount of the Leucocytes, and the degree of the Alkalinity.**

He endeavoured to produce in the blood a change in the leucocytes without a previous Infection or Intoxication, which on its own account may affect the Alkalinity.

As Loewy and Richter emphasise, a connection is experimentally demonstrated between **the number of the Leucocytes and the degree of Alkalinity.**

That **there exists a connection between the Alkalinity of the Blood, and the number of the Leucocytes** appears to be established by the investigations of Loewit and Loewy and Richter.

Loewit further confirms **the relation between the Alkalinity of the Blood and its Protective Power.**

Hence it appears that, **so long as the number of Leucocytes in the blood is still somewhere about a thousand, its bactericidal strength is practically unchanged.**

Only when it falls below this already minimum value, is its strength impaired or entirely suspended.

A much-debated statement made by Virchow more than 50 years ago has been amply confirmed.

He said:

> ***"Claim for the white blood-corpuscles a place in pathology."*** *- Rudolf Virchow*

And Prof. Minkowski (Ueber Leukamie u. Leukocytose, XVII, Kongr. f. inn. Med., 1899, p.184), very properly adds:

> ***"And for Therapeutics."*** *- Prof. Minkowski*

As regards the articles of Profs. Loewy, Richter, and Dr Jacob ("Zeitschrift fuer Khnische Medicin", 1896), **on the influence of the different degrees and stages of the alterations of the leucocytes during the course of the infection in the animal body** we would refer to the original, and to the discussion of this subject by Prof. Poehl in his "Spermin Theory", p.107-117." - in "Rational Organotherapy", 1906.

Emotions Affect White Blood Cells

"Athletes waiting for the game to begin become tense and "wrought up", and this **Emotional State Is Accompanied by a Marked Change In The Makeup of the Blood,** Dr Edmond J. Farris, Wistar Institute of Anatomy and Biology, stated before the meeting of the American Association of Anatomists.

Most notable change, I**s A Great increase in the White Blood Cells: Lymphocytes.** Athletes who gave samples of their blood while they were waiting to go on the field **showed increases ranging from 39.2% to 59.8% in the Lymphocyte count."** - in "Science Digest", June 1942.

The Discovery of Red Blood Cells Acting as Micro-Electrodes

*"In the Scientific Report **"Vm-related extracellular potentials observed in red blood cells"**, 30 September 2021, academics at the University of Surrey **have discovered that Biological Cells generate an Electric Field Voltage** that appears outside and not just within, meaning each cell acts as a tiny electrode. Since this voltage impacts how cells interact with their environment, including the way cells stick to one another. **Through intricate experiments with red blood cells, the research team has shown that the voltage appears outside the cell as well. This means that cells effectively act as tiny transmitters, electrically changing the environment around them.** Cell-scale science is an essential area of study. **By reintroducing the Electrical Element, we are looking for, and finding, a whole new way to understand how the body work. Since the 1790s, scientists have known that electricity plays a role in the function of life, with the discovery in the 1940s that every cell contains a voltage that controls many of its functions. This is particularly the case in muscle and nerve cells but has also been shown to play an important role in diseases such as cancer."** - in **"The discovery of red blood cells acting as micro-electrodes"**, University of Surrey, 6 October 2021.*

The Electro-Magnetic Aspects of Red Blood Cells

*The following articles on the Electro-Magnectic Aspects of Red Blood Cells, include the work of hundreds of Scientists and Health Practitioners on Biophotonics and Biophotonic Therapy; the view of Russian researchers that, by a process of elimination, the Red Blood Cells form the dermal-optic photoreceptor; comments by a Russian Scientist that **the effectiveness of Biophotonic Therapy Against Infections Is Too Great** to be by chance; that it must be some early form of immunity; and comments by Professor Vladimir L. Voeikov, Moscow State University, that **the Red Blood Cells are ultrasensitive to electromagnetic stimuli and that in real time the whole blood forms a well-ordered system. All living cells emit extremely faint light called "Biophotons", they where discovered by Dr Alexander Gurwitch, and where named by Dr Fritz Albert Popp. Biophotons are believed to regulate growth and cell communication.***

"Acting in a coherent fashion, Red Blood Cells play a much more important role in life processes.

Red Blood Cells unique, remarkable role in Oxygen, and carbon dioxide transport sharply distinguishes them from the body's other cells.

So do their anaerobic energy metabolism, peculiar biconcave shape, 120 day life cycle (with 2,000,000 new Red Blood Cells formed every second), iron content, and extremely high hemoglobin content (roughly 270 million hemoglobin molecules are packed into each one of 25 trillion Red Blood Cells).

While their counterparts in many vertebrates and invertebrates retain the nuclei and organelles that mammalian Red Blood Cells (RBCs) eject in the course of maturation, the erythrocyte group in general exhibits certain "prokaryotoid" characteristics, including an ultrasensitivity to electromagnetic forces.

Hemoglobin contains the same porphyrin ring as chlorophyll, though the ring in chlorophyll is coordinated by a Magnesium Atom instead of an iron one.

Given chlorophyll's role as the light-processing molecule of plants, hemoglobin thus may be especially well equipped to absorb and process light.

The coordinated group response of the whole blood to threats and the Red Blood Cells apparent participation in the "communications phenomenon" whereby cells signal to each other add to the picture of Red Blood Cells as conserved, "prokaryotoid" or more exactly "metakaryotic": they have moved beyond containing nuclei.

Neural Cells, primarily neurons and glial cells, form the nervous system, with neurons transmitting information via electrical signals and glia providing essential support, structure, and nutrients, enabling functions from thought and movement to sensation, all coordinated by the brain, spinal cord, and nerves.

Neurons have a cell body, dendrites to receive signals, and an axon to send them, communicating across tiny gaps called synapses.

The discovery that Neural Cells, can be retrained to become Red Blood Cells suggests that one should think not of different "kinds" of cells but rather of different "states" of cells, so the Red Blood Cells can be considered as being in a metakaryotic state (distinct type of stem cell found in humans and other organisms that differs significantly from conventional eukaryotic cells in how they divide). They differ from other body cells in lesser ways as well; For instance, Red Blood Cells are the only cells that do not produce eicosanoids–prostaglandins, and leukotrienes.

Magnetoreception In Animal Navigation

Over the past 150 years, hundreds of scientists have collected and sifted through evidence on the role of Magnetoreception in animal navigation in creatures ranging from tiny microbes to human beings. While it has been possible to demonstrate that responsiveness to magnetic fields, primarily the geomagnetic field, is found in scores of species, critical, perplexing questions remain.

Various researchers have identified **magnetite and other biomineralized crystal deposits in a range of locations in the bodies of animals, including the well-known deposits in the front of human skulls.**

However, the ultrafineness of magnetoreception, reaching into the low nanotesla region, suggests that "such sensitivities can only be achieved by averaging the responses of large numbers of magnetite-based magnetoreceptors."

But magnetite crystals are generally not found in large numbers, and the presumed exceedingly sensitive and computationally powerful magnetoanalyzer must be something other than the crystals themselves.

Similarly, a leading researcher on the question of Human Magnetoreception concluded on the basis of extensive experimentation in humans states that:

> *"**The first discovery of magnetic material in primate tissue was by Kirschvink** (1981a). The cerebellum, midbrain, and corpus callosum, but not the cerebral cortex, of the brain of rhesus monkeys, Macaca mulatta, were found to have a diffuse saturation isothermal remanent magnetization (sIRM) of about 25 pT, suggesting the presence of between 1 and 5 million single-domain crystals per gram of tissue. Kirschvink (1981b) has also examined human adrenal glands for magnetic remanence. He found a measurable amount of high-coercivity ferromagnetic material which appeared to be finely disseminated throughout the tissue. Between 1 and 10 million single-domain magnetite crystals per gram of tissue would be necessary to account for the observed magnetic remanence. Histological as well as magneto metric techniques have been used to search for magnetic deposits in the human head. Details of the techniques used are in Baker et a1. (1983). Magnetometric measurements on "soft" tissues from the human head revealed no areas of significant magnetic remanence (Le., no readings greater than twice background noise level where background includes the sIRM of the plastic container holding the tissue). Specimens of skull, rib, and sphenoid bone also gave readings less than twice background levels. In the thin but very hard bones that form the walls of the sphenoid/ethmoid sinus complex, however, magnetic remanence was obtained that was consistently greater than twice background. **A unique feature of the study of humans in the general search for animal magnetoreceptors is the combination of behavioral. magnetometric, and anatomical evidence.** Studies of the dowsing response and of orientation in chair and bus experiments all implicate a magnetoreceptor in the front of the head in a region that has elevated magnetic remanence and appears to contain ferric material. The hypothesis that the sinus region is the site of magnetoreception involved in compass and goal orientation by humans awaits testing by micromanipulation of magnetic fields in localized regions of the head during chair and bus experiments. Until then, encouragement comes primarily from the approximate coincidence of this region with that implicated by experiments on compass and goal orientation and, for that matter, dowsing. Other features of the results from chair and bus experiments could also be interpreted in terms of the alignment and realignment of magnetic particles. The improvement in goal orientation while exposed to an artificial magnetic field and the "aftereffect", the influence of a magnet on orientation persisting even after the magnet is removed (Baker, 1984a,b, 1985), are both compatible with the alignment and realignment of magnetic particles. Even the apparent relationship between magnetic storm activity before an experiment and the performance of humans*

(and pigeons) could conceivably be interpreted in terms of the influence of the magnetic storms on the net alignment of magnetic particles. Most, if not all, results from bus and chair experiments seem compatible with a magnetoreceptor based on particles subject to alignment and realignment, either by natural events or by experimental manipulation. The exciting challenge we now face is to produce an internally consistent model that allows the influence on orientation of specific manipulations of particle alignment to be predicted in advance. When we are able to obtain predictable and replicable effects from experiments based on such a model, we may feel that we are at last nearing an understanding of one of the most contentious of biological enigmas.

Summary

The physiological responses of primates to changes in the ambient magnetic field have been studied using monkeys and humans. Magnetic storms and strong, artificial magnetic fields have both been claimed to have an adverse influence on primate physiology. On the other hand, ***when applied to fractured bones, artificial but weak electromagnetic fields have been claimed to aid repair.*** *Few of these physiological responses, however, obviously involve magnetoreception. Studies of the latter have been restricted to humans and have used 3 types of behavioral response: the dowsing reflex; compass orientation; and goal orientation. All 3 series of experiments implicate a magnetoreceptor in the front half of the head, perhaps behind but roughly level with the eyes, while* ***studies of the dowsing response also implicate magnetoreceptors in the region of the adrenal glands. Magnetometric and histological studies of human tissue have found that the adrenal glands and bones from the sphenoid/ethmoid sinus complex are both regions of elevated magnetic remanence,*** *and seem to contain ferric deposits. Studies of compass and goal orientation suggest that ambient magnetic fields can physically alter the magnetoreceptor in a manner that could be consistent with the alignment and realignment of magnetic particles. Such realignment seems sometimes to improve rather than disrupt orientation.*

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> *Adler (1981) at Cornell. R. G. Murphy carried out the exhausting series of chair experiments on Manchester schoolchildren, and nearly 100 friends, family, and students have been experimenters in other chair experiments. Dr P. Semm, Dr J. Ratcliffe, Professor J. Kirschvink, and S. Hemmings provided valuable references. To all of these and the 1,000 or so people who have been subjects, I offer my sincere thanks." - Dr R. Robin Baker, Biologist, University of Manchester, in "Magnetoreception by Man and Other Primates", Magnetite Biomineralization and Magnetoreception in Organisms: A New Biomagnetism, 1996.*

Researchers have found that migratory birds, and homing pigeons display changes in orientation after a magnetic pulse.

The researchers show how a cluster of crystals can carry stable magnetic resonance in macrostructures (chains), only to return to the crystals' usual state after 1-10 days.

This phenomenon is not consistent with an entirely free-flowing magnetoreceptor. A second candidate is the flavoprotein cryptochrome, which in some animals senses geomagnetic fields via light-dependent chemical reactions.

Human retinas contain a significant amount of cryptochrome, though this human cryptochrome has thus far been shown to act as a magnetoreceptor only when transferred to Drosophila. At any rate, hypothesizing that the red blood cells, and their hemolymphatic counterparts form the central animal magnetoreceptor and magnetoanalyzer yields a more satisfying result.

Red blood cells and their hemolymphatic counterparts fit 4 of the criteria ("questions") in a review of the hunt for the animal "magnetoreceptor" much better than do the magnetoreceptors currently under consideration.

They match 14 other points to be found in the literature as well (=18), and their role can be plausibly reconciled with the evidence that human beings possess a weak sense of magnetic orientation.

The 18 points regarding the magnetoreceptor that the Red Blood Cells fit:

1. Red Blood Cells are extremely sensitive to electromagnetic forces, which makes them a prima facie candidate.
2. Their ability to absorb and process light provides a means for transmitting and integrating light and magnetic information.
3. Red Blood Cells or hemolymphatic cells are present throughout the bodies of animals, thus accounting for the "sightings" of the magnetoreceptor in many locations, including in the eyes.
4. Because they are ubiquitous, the Red Blood Cells are the cells that transmit the information collected to the pineal and perhaps elsewhere in the brain via electromagnetic forces.
5. Their electromagnetic signaling is potentially highly nuanced, thus permitting the detailed magnetic mapping identified in honeybees and birds.

6. These blood or hemolymphatic cells are present in a very wide range of species and thus could account for many instances of magnetic navigation, though probably not for its presence in certain bacteria nor, perhaps, for special circumstances in which significant innervated biomineralization has developed. It would be possible to extend the argument to contend that the sensitivity to luminescence of the Red Blood Cells and hemolymphatic cells derived in the distant past from the original chemiluminescence of bacteria. Also, in one instance of innervation (in the snouts of juvenile trout), the fine process of the nerve was reported to be wrapped around an artery in the vicinity of magnetite crystals, which suggests a possible role for the blood cells even in these circumstances.

7. In blood cells with high iron content, the iron might respond to magnetic fields, while in hemolymphatic cells with high copper content, the electroconductivity of copper might play a role.

8. A fluid magnetoreceptor can be reconciled more readily than static ones with the requirement for adjusting to occasional reversals of the earth's magnetic poles.

9. A circulating fluid magnetoreceptor operating in nanosecond time more readily matches the requirement for dynamic turnover suggested by extensive human data collected by one researcher.

10. The Red Blood Cells intercommunication is plausible as a kind of distributed computer network that could handle the very high real-time requirements of the magnetoanalyzer.

11. There is evidence from newts that the magnetoreceptor and the photoreceptor are identical, which would fit the Red Blood Cells since they have high capacity for photoreception (see below).

12. Yet the Red Blood Cells can collect and transmit magnetic information in the absence of light, which would explain how sea turtles and other creatures can navigate in the dark. They can also respond to light in the absence of a magnetic field.

13.The animal magnetoreceptor can serve as a polarity or inclinational compass or both, which the Red Blood Cells can do.

14. The RBCs can serve as a locus of referral for both genetically encoded (innate) and memorized directional information.

15. The magnetoreceptor can adapt its functional range to new intensities following exposure to them over several days, which the Red Blood Cells can presumably accomplish according to the theory laid out below.

16. "Demagnetizing" an animal does not change behavior, which fits the Red Blood Cells better than any biomineralized particles.

17. For fine mapping, there must be many such detectors present, as with the Red Blood Cells.

18. The optimal solution for the problem of the transport of the magnetoreceptor's data to the magnetoanalyzer is that they are one and the same, as is the case with the Red Blood Cells, according to the theory propounded below.

The abundant evidence of excellent navigational abilities among seafarers and hunters, may show that human beings retain a significant latent capacity for magnetoreception, though the presence of other factors aiding navigation (odors, sunlight, stars) tends to undermine this conclusion.

Also, as with dermal optics, it may be that a small minority of people are sensitive to magnetic fields; and it is possible that they are the same ones who perform well at dermal optics. At any rate, it seems reasonable to think that the Red Blood Cells or their hemolymphatic counterparts and predecessors are the animal magnetoreceptor and magnetoanalyzer.

Dermal Optics

In the brain, the glial cells, of which the roughly star-shaped astrocytes form the main type, have traditionally been viewed as the glue that provides a scaffolding for the main players; the neurons. But gliobiologists argue that the astrocytes are active co-equals of the neurons. Employing synchronized intercellular oscillatory calcium waves via gap junctions, neurotransmitters, cytokines, and other signaling processes, astrocytes appear to provide the network of connectivity that would permit the integration required for consciousness.

Certainly the increasing astrocyte-to-neuron ratio in the brains of the “higher” mammals and above all in humans (10:1) would appear to match the requirement for greater mental capacity. Astrocytes connect to blood vessels via endfeet, and they attach to synapses via other extended processes, putting them in an ideal position to “listen and talk” to synapses.

It appears that the astrocyte endfeet serve as switches to control and integrate information flowing from neurons and the Red Blood Cells into consciousness.

According to this hypothesis, the astrocytes play the filtering role that Henri Bergson first ascribed to the brain.

This hypothesis offers an answer to a well-known riddle of neuroscience.

Since the 16th century, it has been reported on many occasions that some or all human beings possess the capacity to see through various places in their skin. Of obvious interest to blind people, this “dermal optics” was studied most intensively in Sverdlovsk (Yekaterinburg) during Soviet times.

Red Blood Cells are known to absorb light passing through the skin. By a process of elimination, Soviet scientists concluded that they are the photoreceptor in dermal optics, as they largely are in Biophotonic Therapy.

The Red Blood Cells, it seems, collect light and magnetic information, integrate it in real time, and “report” it to the pineal and other parts of the brain in some hard-to-discern manner. Dermal optics, Red Blood Cells, and astrocyte filtering can neatly explain the phenomenon of blindsight whereby people can detect stimuli even in fields for which their visual cortex neurons have been destroyed, for instance. Red Blood Cells are especially well-positioned to collect environmental electromagnetic data when they pass through the eyes because the ocular blood vessels are so close to the surface, which is optimized for sight anyway; though blood vessels are not found in the lens. Various kinds of hyperacuity that are too fine to be readily explained by the capabilities of known sensory cells may be attributable to the ultrasensitivity of the Red Blood Cells.

This role of the Red Blood Cells in the eyes runs counter to the argument that the maze of capillaries through which light must penetrate before it reaches the neuron endings of the retina represents an instance of poor design by evolution (i.e., by Nature). In fact, Nature/evolution excellently designed the eye to assure that both systems of sight; Red Blood Cells and Neurons (via the optic nerve), get a good look at the world.

The Conscious Awareness Cells

Meanwhile, the presumed capacity of the Red Blood Cells to integrate and synchronize data provides a far more satisfactory solution to the centrally important "binding problem" of real-time integration of sensory and cognitive data, such as from vision and sound, from different parts of the brain than does the hard-wired neural network, which is severely hobbled by the temporal and spatial distribution of its actions.

The binding problem is one way of stating the more general question of the conscious awareness system, or cellular basis of consciousness, which has been considered by some to be the single most important unresolved problem in the life sciences.

Consciousness is, according to this line of thinking, not localized in the neurons or astrocytes; rather, it is generated via a dynamic, interactive process in which the RBCs "read" the information from the neurons and astrocytes, then combine it with their own information to make sense of it.

This formulation does not seek to rule out the numinous or transcendent properties of consciousness, but rather to connect them to knowable capabilities of the astrocytes and Red Blood Cells.

Considering the Red Blood Cells as the consciousness cells or conscious awareness cells endows them with a role separate from the brain systems for perception, cognition, and action.

This view accords with the views of dualists, who have argued for centuries that there must be a soul that connects somehow with the physical brain yet operates according to distinctive principles. Yet it also accords with the views of monists or materialists, who have insisted that consciousness must be somehow located in the body, and so have sought the cellular location of it there.

In other words, for a long time many knowledgeable people have understood that there must be something with the properties of binding sensory data and making sense of it in real time; and the argument here is that the red blood cells are that "something".

The intertwining of the nervous system and the blood throughout the body permits them to monitor each other and coordinate their activities at every step.

The finding that one nostril can learn from the other may be mediated not through the brain but via Red Blood Cells.

Biophotonic Red Blood Cells signaling may play a role in chronobiology and hormone-like cellular activation.

In similar fashion, the Red Blood Cells could form the “third brain region” that connects the hippocampus and neocortex, mediating the firing of short bursts of electricity in each that permits memory to be replayed, reassessed, and presumably stored long-term during sleep; in rats, at any rate.

To the commonsensical objection that the constant motion of the Red Blood Cells through the brain would preclude them from developing a fix on what is taking place in the neurons and astrocytes, the answer is that biophotonics operates in nanosecond time, i.e., in real time.

At any instant the Red Blood Cells, neurons, and astrocytes are frozen in place in relation to each other, permitting precise, seamlessly updated monitoring and signal exchange.

The common image of the blood derives from films or photographs of blood cells tumbling through arteries. However, at any one time the majority of blood cells are located in the venous part of the vascular system where the flow is slower.

In the capillaries, the blood cells positively dawdle.

On average it takes more than 10 seconds for a blood cell to travel one centimeter in the capillaries.

Therefore, the motion of the red blood cells represents less of a bar to their capability to collect electromagnetic information in real time than might commonly be supposed.

Given the very steady supply of blood to the brain regardless of the body’s state of activity, the emergent property is of a very stable system of hundreds of billions of tiny oculi monitoring their surroundings. If problems arise, they are not in terms of the motion of the Red Blood Cells but rather derive from deficits in their quality or quantity (anemia), and thus in Oxygen supply and mentation.

The flow of blood to parts of the brain involved in thought or other activity, as used for functional Magnetic Resonance Imaging, has traditionally been taken to be for the purpose of supplying Oxygen to the activated neurons.

But one study found that “the heightened neural activity uses only a very small amount of this extra Oxygen.” There is evidence, too, that neural activity associated with signal inputs burns glucose without Oxygen.

This explanation leaves unanswered the question of why oxygen-laden red blood cells rush to the scene of the neural activity.

That the Red Blood Cells should rapidly move to an activated area yet retain their Oxygen: they visit the scene to view it and analyze it.

This same pattern seems to hold for the vascular surge of Red Blood Cells into the entire brain during Rapid Eye Movement sleep/dreaming.

This view of the mind suggests that certain psychological phenomena such as subliminal perception and preconscious processing may actually go on, at least in part, in the red blood cells; or perhaps in a biofield that they generate. So, too, various operations tentatively ascribed to the more primitive parts of the brain may in fact be carried out by the Red Blood Cells.

One can speak of a Cognitive Triad of neurons, astrocytes, and Red Blood Cells that can extend itself into new areas of the brain in learning situations.

Of the three, Red Blood Cells are everywhere in the brain, unlike neurons, astrocytes, or any other cell except white blood cells. While the neurons retain their importance in the sensory and motor systems, the central role of the astrocytes in this formulation fully accords with the findings of various researchers.

The Red Blood Cell Metacolony

This understanding of the red blood cells parallels the theory of the symbiotic origin of initially prokaryotic mitochondria and chloroplasts in eukaryotic cells first enunciated by a 19th century Russian biologist, and more recently developed by Lynn Margulis. It also meshes with the concept that the colonial state is the overwhelming norm for bacteria; again first championed by a 19th century Russian biologist, yet only much later accepted by microbiologists in general.

Certain close-up phenomena currently considered part of parapsychology (e.g., dermal optics) or folklore can readily be explained in simple, mundane terms by reference to the biophysics of the red blood cells and their metakaryotic nature.

How the Red Blood Cells might perform in long-range psi phenomena or across time remains an open question. The Red Blood Cells metacolony must, at any rate, be considered the leading candidate for the role of the ultrasensitive psi organ.

According to this formulation, the Red Blood Cells metacolony exercises the same extraordinary sensitivity and analytical power whether it is "reading" brain cells, conducting immunosurveillance, detecting and analyzing an object on the skin, sensing the geomagnetic field, sensing gravity, or engaging in psi activity.

One implication is that psi is a "bacterioid" phenomenon, which would certainly accord with its quirky nature. It is inherently plausible (though hardly preordained) that all cognitive functions on the continuum between logical thought and psychic intuition or messaging should be a product of a single set of cells; that any such set should incorporate capabilities for both reception and analysis; and that this set should be more "primitive" and all-encompassing than the highly articulated neuronal system that developed rather late in the evolution of the species. That the solution of the binding problem should have an evolutionary explanation that links neurons and astrocytes to a pre-existing mechanism of consciousness; a "brain behind the brain", accords with both logic and common sense.

We can draw up a list of the characteristics of what a broad view of the cellular basis of consciousness might include that the Red Blood Cells match, if they are considered as a metacolony of the sort discussed above:

1. Red Blood Cells are in continuous, intimate contact with every part of the brain in a manner that no type of neuron, glial cell, immune cell, or structural cell is.

2. They are also found throughout the body, thus providing a form of distributed intelligence, which seems appropriate for the organism's integral functioning.
3. They are ultrasensitive to electromagnetic stimulation.
4. They form the dermal optic photoreceptor.
5. They form the animal magnetoreceptor.
6. They bind together photonic and magnetic data.
7. They operate in nanosecond time.
8. Their location in the blood, a fluid, and their exceptional pliability endow them with unusual flexibility.
9. They possess an extraordinary capacity for computation.
10. They hasten to the scene of activation in the brain.
11. They are present throughout the animal kingdom, including in species that lack a brain.
12. The cellular basis of consciousness is a profound problem that plausibly requires a profound solution, ideally delivered by a complete organ — in this case, the blood (we can disregard for the moment the distinction between the Red Blood Cells and the whole blood. It is possible that other elements in the blood play significant roles and that integrated solutions are provided by the whole blood; thus the theory could or should refer to the whole blood and not to the red blood cells alone, though they certainly appear to be the main actors).
13. This interpretation adheres to the principle of redundancy, whereby two or more organs fulfil the same function, allowing them to specialise, and complement each other.
14. This view adheres to the principle of multifunctionality of a given organ.

The Original Immune System

The Red Blood Cells conduct ultrasensitive monitoring for possible threats and can upon occasion respond with a chemiluminescent medicinal effect (termed the phosphorescence of wounds by Civil War surgeons who observed that soldiers whose wounds glowed in the dark were more likely to survive), like that sometimes triggered by Biophotonic Therapy.

It may be also true that certain "placebo" effects, are in fact physically executed via such chemiluminescence.

The articulation of different body organs and development of a closed circulatory system attenuated the leverage that this system could obtain over pathogens, while providing them a multiplicity of hiding places.

The evolutionary response was to develop the highly articulated system of cellular and humoral immunity. A fuller understanding of how the red blood cells behave may explain the extraordinary maneuverability of flying insects who have only 300 neurons, why benthic shrimp have prominent eyes when they live in pitch darkness: the hematocytes in their eyes may act as magnetoreceptors for navigation and the identification of food and predators.

The role of Red Blood Cells in eyes as magnetoreceptors deserves careful investigation.

It is in the eyes that the Red Blood Cells come closest to the surface and can achieve the highest degree of accuracy. The mysterious hemal system in echinoderms fits this pattern as well. Starfish may lack a brain; but they demonstrate a formidable capability for intelligent, coordinated action, including limb regeneration. In effect, one can speak of a Riddle of the Starfish: it is a creature with an organ that has no apparent function, and a function that has no apparent organ.

Conclusion

1. The unique characteristics of the Red Blood Cells differentiate them from other body cells, making them more prokaryotoid and fitting them for remarkable roles.

2. Russian Scientists found that the Red Blood Cells are the dermal-optic photoreceptor makes more sense than any other explanation, and it endows them with an extraordinary capability.

3. The 18 points matching the Red Blood Cells, with the animal magnetoreceptor, and the 14 points matching them with the cellular basis of consciousness, are too high numbers to be simple coincidences.

4. Red Blood Cells; possess decisive advantages over neurons, their main competitors, in terms of numbers, size, flexibility, and speed of processing and interaction.

Acting as a metacolony in real time, the Red Blood Cells form the dermal-optic photoreceptor, the animal magnetoreceptor, the conscious awareness system, the ultrasensitive Psi receptor, and the chemiluminescent Original Immune System.

They constitute the Original Intelligence of our distant oligocellular ancestors.”
- Kenneth J. Dillon, in “Theory of the Red Blood Cells”, 2021.

Chapter 14

Diseases Proceed Primarily From an Impure State of the Blood

> ***"Clear the Blood, and as the Pulse Tension is Reduced, its rate quickened, and the Urine Increased, the Mental Condition Alters as if by magic, ideas flash through the brain, Everything Is Remembered, Nothing is Forgotten, Exercise of Mind and Body is a Pleasure, the Struggle for Existence a Glory, Nothing is too good to happen, the Impossible Is Within Reach, and misfortunes slide like water off a duck's back (well-being). To such a terrible extent Are We the Creatures of the circulation in our brain."***
> *- Dr Alexander Haigh, MD, in "Uric Acid as a Factor in the Causation of Disease", 1896.*

"All diseases proceed primarily from an impure state of the blood.

Hence, cleanse the blood and you restore health!

It has been found that the chief, if not the only, important factor in the causation of disease is a morbid or poisoned condition of the blood." - in "The Bedrock of Health", 1906.

Toxicity of the Blood

> *"Bouchard has isolated 7 distinct poisons in the urine alone, and shows their action on living tissues.* ***He proves the Toxicity of the Blood itself in its capacity of carrier of the poisons to the various excretory organs."*** *- Dr. Thomas J. Orbinson, MD in "The American Journal of Medical Sciences", 1908.*

"Myofascitis is empirically diagnosed and treated under the following headings:

1. Lumbago.
2. Sacroiliac Strain.
3. Sacroiliac Relaxation.
4. Sciatica.
5. Arthritis.
6. Strain of Lumbar Muscles.
7. Rheumatism.
8. Tennis Elbow.
9. Glass Arm.
10. Charley Horse .
11. Contusion.

12. Low Back Pain.
13. Sciatic Scoliosis.
14. Bursitis.
15. Ruptured Muscle Fibers.
16. Toxic Wry Neck.
17. Neuritis or crick of shoulder or neck.
18. Flat feet, (particularly the juvenile type).

Because its local symptoms closely resemble those of the conditions just listed, it has successfully masqueraded under these diagnoses for years by concentrating the physician's **attention on these local or secondary manifestations,** usually deemed orthopedic in nature, **rather than upon the underlying cause: Toxicity of the Blood."** - Dr Fred H. Albee, MD, FACS, in "Myofascitis A Pathological Explanation of Many Apparently Dissimilar Conditions", American Journal of Surgery, January 1934.

Toxicity of the Blood in Influenza

"The general anergy which occurs in Influenza is expressed also in a reduction in the specific immunobiological indices: in patients with Influenza the Pirquet reaction, previously positive, becomes negative in 72% (Debrl, 1918)

As far as the distribution of the Influenza in the patient's body is concerned, this problem has been little studied.

However, the characteristics of the pathogenesis of Influenza indicate that the Bacillus enters the blood stream, and many Symptoms of Intoxication are apparently associated with this.

Recently, it has been established through the direct observations of Solov'yev, Zakstel'skaya and Tarusov (1950) **on patients with Influenza that in the acute stage of the disease the Blood possesses Pronounced Toxic Properties.**

The Toxic Properties of the Blood are most pronounced during the first 2 days of the disease, that is, at a time when the general toxic symptoms of the disease reach their greatest intensity.

The Reduction of these Manifestations proceeds in parallel with the Reduction in Toxic Properties of the Blood.

These observations were continued by Zakstel1skaya (1951, 1953), who, using the constriction test of Tarusov, investigated 124 Influenza patients during 1948/1949.

It was shown through these investigations that the Influenza (the specific Toxic Properties of the patients blood are associated with it), circulates in the blood for the first 4 or 5 days of the disease.

The pronounced Toxicity of the Blood on the 1st, and partly on the 2nd day of the disease, and its decrease on subsequent days are distinctly seen.

The strict correlation between the concentration of the Toxic Factor (that is, Virulence), in the blood and the height of the fever, attracts attention.

This correlation is distinctly expressed also in the comparison in the results of large-scale investigations shows **the Relationship Between Percentage of Febrile Patients and Percentage of Patients With Positive Toxic Test of Blood When Examined on Various Days of the Disease.**

The Role of Secondary Microflora in Influenza

The significance of Bacterial Infection in Influenza in people was studied in parallel with the experimental data presented above.

Drobyshevskaya, Ostrovskaya and Shishkina (1937) made careful investigations of the Microflora of the respiratory tract in patients with Influenza dynamically according to periods: the first 6 days of the disease, the second 6 days of the disease, and the period between the 13th and the 40th day (convalescence).

The Pfeiffer Bacillus was isolated during the first period in 90% of the patients; in the second period, in 58%; in the third period, in 34%, whereby in 42% of the cases virulent forms were isolated.

The corresponding findings of the Pneumococcus (the majority were type IV) amounted to 100% - 76% - 56%; of the Micrococcus Catarrhalis, 84% - 50% - 31%; of the Hemolytlc Streptococcus, 28% - 17% - l2%.

The quantitative characteristics of the Microflora isolated attract attention: the number of microbes plated out during the acute period exceeded their number during convalescence by 1,000 times.

Smorodlntsev, Gulamov and Drobyshevskly (1948) studied the dynamics of secondary Microflora in Influenza during 1936 and 1940.

The authors characterized the changes in the Microflora of the upper respiratory tract in Influenza as an intense mobilization of a broad series of conditionally pathogenic microbes during the first few days of the disease.

The cessation of the clinical signs, was accompanied by a considerable quantitative reduction or complete disappearance of the bacteria in the majority of patients.

The concentration of microbes in the upper respiratory tract changed markedly.

Thus, during the first 6 day period the average number of Pfeiffer Bacilli for the entire washing was equal to more than 10,000 microbial cells; of Pneumococci, about 1001 000.

At the beginning of the second 6 day period, their number decreased by 100-1,000 times, and after the 13th day only solitary cells were encountered throughout the material. Similar data were presented in the work of Subbotina (1954).

Glukhov (1949), on investigating Influenza in 1945 and 19461 found a Streptococcal antigen in 70.2% of the patients in the serum (during the period of convalescence).

The complications were produced in large part by the Streptococcus.

According to the data of Krivaya-Usherenko (195l), **in Influenza patients Staphylococci, Streptococci, Pneumococci and the Bacilli Influenzae are found most frequently in the throat; In addition, the Micrococci Catarrhalis, Diplobacteria of Friedlander and other microbes are found.**

No significant differences were observed in the species composition of these microbes in patients with Influenza and Acute Catarrhs.

None of the microbes was isolated from all of the patients; however, **the Staphylococci were most frequent and abundant.**

In complicated Influenza the number of microbes increased markedly, whereas in uncomplicated Influenza the increase in their number was slight and was not maintained long.

In the work of Zhdanov and co-authors (1953), who made a comparative study of the Bacterial Microflora in Influenza and Acute Catarrhs, data were obtained which were similar to the results of Smorodintsev's and his co-workers research.

The authors did not find any essential differences in the composition or quantitative relationships of bacteria isolated in patients with influenza and acute catarrhs. **The serological investigations - the agglutination reaction of bacteria isolated from the patients with their sera taken during the acute period and during the period of convalescence - showed a variegated picture.**

It was impossible to demonstrate any serological changes in the patients with respect to any of the most frequently isolated microbes (Staphylococci, Streptococci). **Here, it is fitting to analyse the influence of Cold Stimuli on the development of the Influenzal infection.**

Existing observations are of an empirical nature **and indicate that the Chilling Factor may aggravate the course of Influenza.**

More exact research pertains to **the effect of the Cold Factor on the development of infection produced by conditionally pathogenic microflora of the respiratory tract. We consider it possible to dwell briefly on these data, because: Secondary Infection Is Of Importance in the Pathogenesis of Influenza.**

The nature of the effect of the Cold Factor has been demonstrated by the investigations of Marshak, Koyranskiy, and Epshteyn.

Marshak and co-authors (1935, 1938), established the fact that chilling of localized areas of the skin produces both a local reflex reaction expressed in a constriction of the blood vessels and a change in the blood supply and corresponding vascular reactions and an increase in the secretion of the mucous membranes of the upper respiratory tract.

According to the data of Koyranskiy (1940, 1948), the Reflex Reaction to local chilling, Involves a Number of Organs and Systems.

Here, weak cold stimuli, particularly a replacement of one temperature routine by another, lead to the development of the most pronounced reactions.

Epshteyn and co-workers (1948), **made a detailed study of the effect of local chilling on the development of infection in the nasopharynx, infection produced conditionally pathogenic microflora.**

The introduction into the respiratory tract per se of Microflora isolated from the nasopharynx did not produce any kind of pathological reactions.

If the persons examined were exposed to local chilling, they developed catarrhal signs in the upper respiratory tract, chiefly mild.

The possibility of "toughening" people (make or become stronger or more resilient) to repeated episodes of chilling was shown, and the latter, in this case, were not accompanied any pathological signs.

Wildfuhr (1950) used a cold stimulus (inhalation of cold air into the mouth and chilling of the feet) on normal persons, and those predisposed to colds.

In those predisposed to colds, the alexin and opsonin content in the blood decreased sharply; in normal people a slight decrease was observed.

Critical Evaluation of Certain Views on the Pathogenesis of Influenza

As a conclusion it seems expedient to give a critical evaluation of certain views on the pathogenesis of influenza and to make the necessary generalizations.

Even in the old works of the Russian clinicians influenza was recorded as a general disease wherein general Intoxication of the body was most important, along with the local Inflammatory processes.

The main result of the local effect of the Influenza pathogen is a Necrosis of the Epithelium, and an Inflammation of the Mucous membrane of the respiratory tract in mild cases and a Necrotic Hemorrhagic Pneumonia in severe cases.

The general toxic effect of the influenza pathogen consists mainly of the involvement of the nervous system, cardiovascular system, and a suppression of the protective forces of the body.

If we do not dwell on the unimportant details, these are the kind of statements which are found in the works of Voskresenskiy (1827), Filatov (1883), Glinchikov (1922), Konchalovskiy (1927), Ivashentsov (1932), Rozenberg (1934) and other clinicians who studied influenza.

After the discovery of the influenza pathogens a tendency was outlined in the foreign literature toward considering the pathogenesis of influenza a purely local process. **The main factor determining the acuteness and seriousness of the initial signs of influenza is specifically the rapidity of spread of the infection along the epithelium of the respiratory tract.**

Typical "toxic" signs at the beginning of the disease, in his opinion, should be considered the result of absorption of products of diffuse and almost simultaneous necrosis of a large number of epithelial cells.

Therefore, according to Burnet, the entire situation lies in the necrosis of epithelium lining the respiratory tract, and in the quantity of decomposition products which enter the body from there.

With less necrosis less decomposition products are absorbed and the toxic state is less pronounced." - Viktor Mikhaĭlovich Zhdanov, F.G. Epshtein, V.D. Solov'ev, in "The Study of Influenza", Ucheniye O Grippe, 1960.

The Relationship of Toxaemia to Heart Disease

"Diphtheria

General Symptoms:

In moderate or severe cases there is usually initial fever, of very short duration, and sore throat; the latter, however, is not a commanding symptom.

In the severest cases evidences of profound blood poisoning (Toxemia) are discerned: pallor, soft and irregular pulse, general weakness and marked subjective consciousness of illness.

Vomiting, a rapid fall in the pulse and hemorrhagic manifestations are all of grave prognostic significance.

Evidences of toxic neuritis appear in a variable percentage of cases and are observed between the 6 day and the 6 or 7 week.

In order of frequency and time of appearance, paralyses of the palate, eye, pharynx and muscles of the trunk and limbs are observed.

The palate lesion is indicated by nasal voice and by regurgitation of fluids through the nose; that of the eye muscles by squint, failure of accommodation and, more rarely, drooping of the upper eyelid (ptosis); and that of the pharynx by difficulty in swallowing.

Causes of Death

Death may result in 4 different ways:

1. A primary massive Toxemia, which mainly affects the heart, may lead to death within 3 days;

2. A less profound Toxemia may lead to heart failure within the first 2 weeks;

3. Obstruction of breathing caused by membrane formation and edema of the upper respiratory tract; and

4. Extensive paralytic manifestations, e.g., diaphragmatic paralysis or inhalation pneumonia, that may be directly or indirectly responsible for many late deaths." - in "Encyclopaedia Britannica", Vol. 7, 1972.

Concerning Disease & The State of the Blood

"The cause of disease is not the disease, but the deviation from the normal, produced by any cause, is the pathological condition, and that is the disease.

The idea of an incurable disease is ridiculous.

That Consumption (tuberculosis) Is Incurable Is A Silly Hoax, Not Believed by Anyone Having an Average Share of Common Sense, or Learning.

Thousands of Autopsies prove that the subject at some period of his life had been affected with real Consumption, and had recovered, even from the late stages of the disease.

There Is No Incurable Disease, there is no disease from which complete recovery has not taken place without medical treatment whatever, and of course would often take place with adequate treatment. What kind of a tangle, or derangement, is possible in the organism that will give no indications, have no natural language of its own and no certain demands for relief?

There is no such a condition in all human pathology.

And when we say there is, and make a list of such diseases, we simply deceive ourselves and our people.

We trace symptoms singly to that which produces them.

We may take any one of these symptoms and trace it back to the closure of the pores of the skin.

Bronchial exudates, etc.; it is from a toxic condition of the blood; this is from retention by the skin.

Rheumatism, it is from toxic deposits in the tissues; these are from a circulation overloaded with the same, and this is from retention by the skin.

Neuralgia, it results from congestion and toxic irritation of a nerve; this from decompositions that recomposed toxic compounds in the blood retained by a closure of the dermal pores. The tendency to devitalization, ulceration, eruption and fetor point to the rapid formation of toxic compounds in the blood.

Glandular Derangement points to the same, and this indicates a source foreign to the body, and antagonistic to normal functional process.

Examination shows that a foreign factor actually exists in numbers proportionate to the gravity of the case.

The nervous condition; the irritation and general nervous derangement is in consequence of Toxins in the Blood of more virulence than are common to the body, and these indicate the source, as a foreign invader.

The character of the pulse; **the circulatory excitement indicates nervous irritation; this indicates the toxin that indicates the invader.**

The temperature indicates abnormal waste to be oxydized, and this indicates the microbe that makes the waste.

The symptom of eruptions; these show toxic deposits in the glands of the skin; these show the condition of the blood from which they are derived; this indicates the invader that makes it so.

The symptom of cough; this is the effort of the system to throw off irritating exudates in the lungs, the exudates are from decompositions in the blood, these are from an excess of nutrition in the blood and from systemic waste, this is in consequence of the cells not being able to take the nutriment and keep up tissue repair and stop abnormal waste, this is in consequence of nervous weakness and inability of the sympathetic to supply the cells with positive magnetic influence to enable them to attract the nutriment from the blood stream.

Irritation Is From Toxic Compounds In The Blood; and is well marked in the pulse.

Inflammation Is Also Well Marked, and Many Systemic Disorders, if not all, are perfectly distinct.

The Coating of the Tongue Means Decomposition in the Blood, and that means vastly more than stomach derangement.

It Means General Glandular Derangement, The Formation of Toxins from Products of Decomposition, and Deposits in the Tissues of the Mineral Matters Contained in the Substance Decomposed, or the Loading of Secretions with the Same. It may mean, under certain conditions, the formation of concretions (masses of mineral matter). If Epsom Bath, and a stimulant be indicated in the last stages of enervation, you can hardly repeat them too often.

The capacity of the patient to utilize them is the only limit.

In chronic conditions, when the patient is dying for a lack of cell salts in the blood, you should give bran buns [toasted rye and small amounts of red wine] as often as they can be utilized.

We have demonstrated many times the fact that all disease is produced by a deviation from the natural, normal requirements, and that these deviations are, so far as we are able to trace them: Retention, Invasion, Enervation, Trauma, Poison.

Any one, or more, of these prime causes may produce acute or chronic disease in a great variety of forms, as the conditions and circumstances may vary.

We have known a person to take cold; that produces the condition we term retention; then he poisoned himself with medicine; that adds another factor; the medicine was an anodyne, which lowered the nerve power and prevented natural reaction in its effort to throw off the retention, so it continued.

The blood became loaded with toxic compounds, which made the breath more offensive than the fumes from a still-house.

The peptic glands, as well as all the glands, drew their secretions from this toxic blood, the nerves in the stomach, as well as all the nerves in the body, were irritated and sickened, insatiable greed, anorexia, diarrhoea, constipation, inflammation, kidney troubles, heart disease, “appendicitis”, ulceration and a great many other symptoms appeared as time went on.

Finally the doctors pronounced it a chronic disease, and recovery impossible.

What makes the symptoms of a cold, unless it be the morbid matters, ptomaines, etc., retained in the blood? Then how does Epsom relieve a Cold?

Natural diagnosis finds that **the underlying conditions, the symptom producer in sclerosis is substantially the same as in rheumatism, gout, etc.**

The deposits in rheumatism and gout are a recomposition from what was once nutriment in the blood.

The deposits in Sclerosis are exactly the same, and from the same source.

Recompositions are from the products of decompositions.

Decompositions in the blood could not often take place unless the blood carried more than the cells could utilize, either carried more than a normal amount, or the cells could not, from some cause, take a normal amount, leaving an excess of nutriment in the blood to decompose.

In Bronchitis the nerve power is, below the normal, and requires to be raised.

The blood is toxic and requires to be cleansed, antidoted and the toxic source cut off. It may be excessive amount of nutriment in the diet, or excessive organic waste and breaking down of cells, etc.

A proper tonic, a stimulant, if necessary, to give the tonic effect.

The daily warm Epsom sponge Bath to put the skin in good order for the elimination of waste and to antidote Toxic Compounds in the blood.

Small doses of laxative syrup 3 to 6 times daily to antidote toxines in the alimentary canal. And the fact that rheumatism is more common at a more advanced age, and another fact, that hearty eaters of rich foods are the principal sufferers, and the further fact, that when the diet is properly arranged to carry no more nutriment into the blood than the cells will use in a natural way, an improvement invariably takes place without the aid of any drug.

Chronic Nervous Cough

Those who suffer with catarrh and asthma are subject to this kind of cough.

The force of the pulse is below normal, showing enervation.

The coughing spells come on at nearly regular intervals, and last a certain time and subside, indicating a nerve storm, or diathesis. **The secretions are scalding in character, showing that they contain very toxic matters; they affect the skin about the nose and mouth very painfully. The patient is prone to take cold every change of the weather, and even from going into the outdoor air from a warm room, and is extremely sensitive to drafts of air, etc... The toxic mucous secretions are a prominent symptom in sight, and traceable to decomposition in the blood, from the elements of which the toxins form, and appear in the glandular secretions, especially those of the mucous membrane. Mucous secretions more profuse than normal, indicate toxic elements in the blood that irritate the governing nerves of the glands to abnormal activity, same as pungent odours and dust and smoke, etc., may excite the nerves of the nasal cavity.**

These Irritating Elements May Be From 3 Sources:

1. From the decomposition of an excess of nutriment in the blood.

2. From the breaking down of tissues and abnormal tissue waste.

3. From bacteria, the decomposition caused by bacteria, of the blood, the cells, the nutriment in the blood and lymph, and by the decomposition of the bacteria themselves, for the life term of these minute organisms is very short in many cases, and generation after generation follows, and the decomposition must be very considerable. When the blood is loaded with the elements of decomposition, confined, warm and constantly in motion, with vital and electrical influences ever present, recomposition must take place.

The kidneys and other glands, especially the mucous glands, secrete great quantities of partially decomposed albumen, the nervous system shows the effect of toxic matters in the circulation, often the breath is loaded with their odours. The urine and sweat may be very offensive. If there is an abnormal decomposition in the blood, partly, if not principally, from an excess of ingested nutriment, cut the diet down to safe limits. This done, a marked improvement always follows, and this improvement is the best proof we have of the apparent fact that a considerable amount of the decomposition in the blood is from waste nutriment in the blood, and not entirely from cell waste.

Our most successful physicians cut the diet down, and so reduce the decomposition in the blood so that nature may have a possible chance to react.

Some do it empirically, not knowing any reason why.

The natural appetite becomes diseased by transgression.

The mother is prone to allow her children to eat too much of some dish particularly good and rich. She does not understand the difference between a stomach full of something rich and the same of other things low in nutrition, **and so she allows them to overload the blood, then the excess, over what the cells can take, decomposes and the elements set free are drawn together in new combinations, which are always more or less toxic**, because carbon is in all foods, if not the very base of food material.

These toxins, so formed [carried] in the Blood, Irritate the Nerves, causing the Contractions in the Muscles, which cause:

Colic, Fever, Pain and even Convulsions and Death.

Some toxin may land in a little ductless gland and a boil result, and even great carbuncles may form in the larger glands in the same way.

Also congestions and abscesses may form in any organ or part of the body.

The toxins may take the form of Uric Acid, and Urates and become stranded in the dense tissues of the joints and arteries.

The blood toxins vitiate the secretions, the secretions are no less poison than the blood from which they are drawn and nothing tastes good any more. The stomach secretions are bad, the liver secretions are worse, and all secretions become an addition of toxicity throughout the entire extent of the canal.

In hemorrhoids, and in all diseases of the rectum and colon, there seems to be an apathetic circulation, mainly a push and engorgement of stale blood, not the bright red circulation of vessels with active muscles and live nerves.

The nerves are numb with compression and poison and the muscles are inactive, and the consequences could all be foretold from the diet.

If the alimentary canal was 30 centimetres longer there would be so many diseases from the increased toxicity of the bowel secretions that all the diseases we now know of would be forgotten, as of small consequence.

There are many chronic diseases that result from overloading the blood.

We used to hear of overloading the stomach, and we never placed too much importance on it, **but the effects of overloading the blood are much more serious and less thought of.**

Certain glands elaborate certain acids.

The glands of the skin elaborate Acids and other compounds from the blood, either to facilitate excretion, or as matters of excretion.

5 deviations to which the symptoms of disease are constantly pointing, and to which all symptoms may be traced in a strictly scientific manner:

1. **Retention.**
2. **Invasion.**
3. **Enervation.**
4. **Trauma.**
5. **Poison.**

We have never observed a symptom in any disease condition, which when traced in a fair manner did not relate back to one of these symptom producing deviations.

There is Generally a:

1. Stiffness or Soreness of the Muscles;

Sometimes there is marked:

2. Fever (High Temperature); Pain; Sore Throat; Coated Tongue; Perversion of Taste; Loss of Smell; Constipation; Headache; Rheumatism; Renal excitement or Apathy; and General Toxemia.

All Changes are Caused by Chemical Decomposition and Recomposition in the Blood, hence the rapidity of the changes mark the rapidity of the pathological changes within. The Most Distressing Symptoms in Chronic Disease Arise from Toxins in the Blood. These Arise Mainly from Decompositions of Nutriment which the Cells were Unable to Assimilate, a small amount of Toxins arises from Decomposition of Waste Retained in the Blood. It is seldom, even when **waste** is excessive, that **it is the chief source of decomposition. In chronic disease the appetite is capricious, and the blood becomes overloaded with nutriment far in excess of the capacity of the cells to take under the prevailing circumstances and condition of the Enfeebled Nerve Power [Force]. All Chronic Disease will be Greatly Benefited by Proper Dietary Regulation, and many Advanced Cases Cannot be Cured Without It.**

Blood carries the Toxins that Cause the Symptoms of Disease.

A Microbe is not necessary to retention, enervation, trauma or poison.

Why do you not think about more practical questions, such as Chronic Constipation, etc...?" - Dr William Harvey Burgess, MD, in "Chronic Disease; the Natural Method of Diagnosis and Successful Treatment", 1907.

Chapter 15

Tooth Nutrition

“Because some Important Constituents which provide Nutrients Necessary to Good Tooth Structure Are Missing in the Soil of Northern Sweden, children are plagued with

Dental Caries, and Toothache.

Alfred Aslander from the Royal Institute of Technology, Division of Agriculture, Stockholm, recently presented this view as he reported research on “Dental Caries from the Nutritional Point of View.”

Aslander, believing that his own poor teeth resulted from phosphate starvation as a youth, began experimenting with his son born in 1938, by giving him small daily doses of CaHP04 (Phosphorus).

He reports that the child's teeth grew white and strong.

After 2 years, he replaced the phosphate with bone meal which from experiments with animals appeared to provide more suitable nutrition.

In addition to its bulk of phosphates, Bone Meal (a source of calcium, phosphorus, and trace elements), some or all of which may be essential tooth nutrients.

He has continued his studies with his own 3 children and others, and has shown that it is possible to prevent caries in children by a suitable form of tooth nutrition.

He believes that: Dental Caries will Only Attack Teeth That Are Undernourished. If the blood stream is lacking, or deficient in essential mineral nutrients, the structure of the tooth will be impaired; and the tooth will not endure the normal strains to which it is subjected.

Dental Caries will then inevitably appear.

Dr Aslander points out that:

1. Earlier generations had far better teeth than the present generation because they consumed rougher foods including bones, gristle, etc. from which they derived certain essential minerals. Today, this somewhat crude table-fare has been abandoned; and as a consequence, the mineral nutrition of the teeth has become deficient.

2. The Cariogenic properties of [Cane] Sugar, and other carbohydrates are not due to their fermentation into lactic acid, but to their lack of minerals essential for tooth nutrition. The same applies to a great extent to Mineral-Deficient [Refined] White-Wheat Flour. The greater the proportion of these and other Mineral-Poor Foods in the daily diet, the more the teeth will be starved of minerals; structure will be impaired and caries will appear.

3. The effect of fluorine on dental health has been elucidated. From the nutritional standpoint, it is one of several essential tooth nutrients. Accordingly, the addition of fluorine to the nutritional supply cannot bring about complete tooth nutrition unless it happens to be the only tooth nutrient lacking. If other tooth nutrients are missing, then the addition of fluorine provides only a partial improvement. Moreover, if the fluorine supply is excessive compared with the supply of other mineral tooth nutrients, unbalanced nutrition results.

Dr Aslander argues that fluoridation was proposed at a time when it was assumed that fluorine was the only element lacking for the establishment of dental health. Since we now know that at least 6 elements, probably more, are essential tooth nutrients, the very foundation on which fluoridation is based has been destroyed.

Dr Aslander concludes that by complete tooth nutrition, it is possible to grow teeth that are highly resistant or immune to dental caries.

For that reason, a purely inorganic mixture of suitable minerals should be tested.

Dental Caries will vanish when the complete tooth nutrition theory has been sufficiently tested and the method universally adopted.″ - in "European Scientific Notes", Office of Naval Research Branch Office, US Embassy London, 1962.

Dental Caries From Poor Food Choices

"In Sweden Dental Caries is omnipresent.

In 1942 only 1 individual per 1,000 was found to be free from Dental Caries among young men starting military training, and in the school-year 1957-1958, only 40 school children in Stockholm were found to have caries-free teeth among 52,352. Thus 99.99%% of the population suffer from Dental Caries.

In the summer of 1938 the writer was forced to ponder deeply on the problem of dental caries.

My wife was then going to have our first baby, and I was determined that that child should not suffer from dental caries.

Dental Caries in children appeared to be most probably a result of insufficient nutrition.

Common food is too poor in nutrients essential for the formation of strong and healthy teeth.

My investigations of the soils on the parental farm had shown them to be very poor in phosphates, and thus the home-produced food was also probably poor in phosphate.

The bulk of the teeth is made up of phosphates. My Poor Teeth could be a result of Phosphate Starvation. Hence, my child born in the late summer of 1938 was given small daily doses of CaHP04.

The teeth grew white and strong.

After 2 years the phosphate was replaced by bone meal.

During these 2 years, was engaged in extensive nutritional experiments with rabbits, guinea pigs and rats, which brought out some new aspects of nutritional problems.

Bone meal appeared to provide more suitable nutrition for the teeth than phosphate. In addition to its bulk of phosphates, bone meal contains a good many other elements, some or all of which may be essential tooth nutrients.

Results

The experiment on tooth nutrition with my children as human guinea pigs started in 1938. My children then 3 in number, were free from dental caries, while their playmates, living under similar conditions but not given bone meal, suffered badly from that disease.

Apparently it is possible to prevent dental caries in children by a suitable form of tooth nutrition, Åslander (1948).

Later on, a good many children have been reported free from dental caries as a result of the writer's bone-meal method.

A tooth is a living and independent individual.

It grows out of the mandible in about the same way as a plant grows out of the soil. The root of a plant anchors the plant in the soil and takes up a considerable number of mineral plant nutrients from the soil solution.

At present we know at least 12 such essential plant nutrients, all of which must be taken up in sufficient quantities if the plant is to grow normally.

If any one of them is lacking or present in too small amounts, then the plant will develop a deficiency disease. The vigour and health of the plant is wholly dependent upon a sufficient supply of all the nutrients needed.

Likewise, the root of a tooth anchors the tooth in the mandible and takes up from the blood stream several essential minerals, of which at least 6 are known, and the vigour and health of the tooth is wholly dependent upon a sufficiency of all the nutrients needed.

If one or more of the essential mineral nutrients are lacking or present in the blood stream in insufficient amounts then the structure of the tooth will be of poor quality, such as cannot endure the normal strains to which a tooth is subjected.

Dental Caries will inevitably appear.

Dental Caries will Attack Only Teeth that are Undernourished, Not Teeth that have Received Complete Tooth Nutrition.

Dental Caries is a deficiency disease.

Our forefathers had far better teeth than the present generation. My parents, born around 100 years ago, had as children perfect teeth.

Thus their tooth nutrition must have been faultless. They were bone-eaters, in those days the small Baltic herring was grilled crisp and eaten bones and all.

Moreover, it was eaten at least once daily.

The mineral nutrition of the teeth became deficient.

As a consequence children had very poor teeth.

The Cariogenic Properties of [cane] sugar and other carbohydrates are due not to their fermentation into lactic acid but to their lack of minerals essential for tooth nutrition.

White sugar is almost entirely deprived of all the healthy minerals of sugar cane or sugar beet.

The same applies to a great extent to white [refined] wheat flour.

The greater the proportion of these and other mineral-poor foodstuffs in the daily fare, the more the teeth will be starved of minerals, the poorer will be the structure of the teeth and the more rapidly will dental caries appear.

From the point of view of tooth nutrition it would be convenient to recommend mineral-rich foods such as fruit and vegetables, preferably eaten raw, so that all of the minerals are obtained, with the addition of small amounts of Salts of Iron, and Iodine. The prevention of dental caries should begin in the mother's womb and not in the dentist's chair." - Alfred Aslander, in "Dental Caries From the Nutritional Point of View", Royal Institute of Technology, Division of Agriculture, Sweden, 1961.

"Growing Healthy Teeth Is Very like Growing Healthy Plants.

In both cases a complete set of nutrients is necessary.

If a tooth receives a deficient nutrition during the period of growth, then deficiency diseases are bound to appear.

The structure of the teeth will be of such poor quality that the tooth cannot withstand the attacks of cariogenic agents; the structure will collapse, and dental caries sets in. If, on the other hand, a tooth develops under proper nutritional conditions, it will become highly resistant to or immune from dental caries.

Complete Tooth Nutrition

The essential tooth nutrients are, in the first place, the minerals that form the tooth structure and the agents that catalyze the formation of the structure (Aslander, 1958).

My bone meal method was worked out on the assumption that the most conspicuous fault of our common daily fare is its deficiency in tooth-forming minerals.

In order to supply a complete tooth nutrition, bone meal was chosen as a food supplement; analyses of the improved brand of bone meal used by the writer (Aslander, 1960) have shown that it contains all the tooth nutrients that up to date have been proved to be essential.

In addition, bone meal contains a number of [other] minerals that may in the future be found to be tooth nutrients.

The main rules for the bone meal method are as follows:

1. Tooth nutrition by bone meal [supplementation] should begin as soon as possible, preferably with the pregnant mother, at least during the second half of the pregnancy and during the months of breast-feeding. The daily dose should be 2 to 3 grams. (It is advisable to begin with small doses)

2. Bone meal should be given to the child as soon as the milk is supplemented by other foods. The initial dose should be almost microscopic; by allowing a slow increase, the daily dose should be about 1.5 to 2 grams at the age of 2.

3. The daily dose of about 2 grams must be given continuously until all the teeth are full grown; that is, up to the age of 20, and thereafter, preferably throughout life.

4. An improved brand of bone meal must be used. So far, only the brand used by the writer has given perfect results.

5. Dental care must be natural. If brushing is performed, then only a Very Soft Brush should be allowed. A hard toothbrush and toothpastes must be avoided.

This gentle dental care is based on the theory that the dental plaque is a protective structure that should not be destroyed.

The theory introduced by Stratfors (1950), to the effect that the dental plaque is harmful to the teeth because it harbors acid-forming bacteria, must be regarded as somewhat fantastic.

It is hardly likely that nature would form a harmful coating on the teeth.

Far more probable is the theory that the dental plaque is a protective structure.

Dental care should be gentle and aim only at removing food residues that will putrefy and thus produce foul breath.

When the rules above have been strictly observed, it has been proved by more than twenty years of experience that both the deciduous teeth and the permanent teeth will be completely free of dental caries." - Alfred Aslander, in "How the Facts Are Suppressed in Connection with Bone Meal", The Royal Institute of Technology, Stockholm, Sweden, 1964.

The Teeth As A Foci of Infection

"Hygiene can only be ensured by knowledge of certain elementary principles, one of the most important of which is: ***Antisepsis of the Mouth, Is The Gateway to Many Diseases."*** *- Dr Louis C. Barail, MD, DDS, in "Annales d'Hygiène Publique, Industrielle et Sociale", 1933.*

"I have been made happy by discovering that; I Have Only Added to the Observations of Other Physicians, in Pointing Out:

A Connection Between the Extraction of Decayed and Diseased Teeth, and the Cure of General Diseases.

Several cases of the efficacy of that remedy in relieving Headache and Vertigo are mentioned by Darwin. Dr Gater related that; Dr Pettit, a celebrated French Surgeon, had often Cured Intermitting Fevers, which had resisted the bark for months, and even years, by this prescription; and he quotes from his works 2 cases, the 1 of Consumption (Tuberculosis), the other of Vertigo, both of long continuance, which were suddenly Cured by the Extraction of 2 Decayed Teeth in the former, and of 2 supernumerary Teeth in the latter case.

"When we consider how often the Teeth, when decayed, are exposed to irritation from hot and cold drinks and aliments, from pressure by mastication, and from the cold air, and how intimate the connection of the mouth is with the whole system, I am disposed to believe they are often the unsuspected causes of general, and particularly of nervous diseases. When we add to the list of those diseases the morbid effects of the acrid and putrid matters which are sometimes discharged from caries teeth, or from ulcers in the gums created by them, also the influence which both have in preventing perfect mastication, and the connection of that animal function with good health, I cannot help thinking that our success in the treatment of all chronic diseases would be very much promoted, by directing our inquiries into the state of the teeth in sick people, and by advising their extraction in every case in which they are decayed.
It is not necessary that they should be attended with pain, in order to produce diseases, for splinters, tumours, and other irritants before mentioned, often bring on disease and death, when they give no pain, and are unsuspected as causes of them.
This translation of sensation and motion to parts remote from the place where impressions are made appears in many instances, and seems to depend upon an original law of the animal economy". " - Dr Benjamin Rush, MD in "Medical Inquiries and Observations", 1809.

Endodontic-Endotoxemia

"For more than 135 years there have been attempts to retain teeth whose nutrient canals have been destroyed by placing gutta-percha or other sealants within the canals.

Numerous innovative mechanical techniques have been developed over the years to render the canals sterile and uninhabitable for microorganisms.

Virtually all advertisements within the industry trade journals emphasize "mechanical obturation" and not the biochemical aspects of sterility of the canal system, or if the canals can be sterilized at all in the short or long term.

As reported recently, overemphasis on this aspect of simply filling the empty spaces within the root canal system and its importance has misled the field of endodontology. What is most critical, is that root canal teeth become nesting sites for microbes who, due to the loss of outward hydraulic pressure from within the body of the dental organ since the pulp no longer is living, migrate though the dentin into the peri-radicular tissues, thence into the circulatory system and other tissues.

In "Dental Clinics of North America", Vol. 18, No. 2, April 1974, Dr Kaare Langeland, DDS, reviewed "Root Canal Sealants and Pastes", in which states:

> ***"The fact that sealers and pastes will contact vital or disintegrating tissue connected with the general circulation allows for generalized distribution by blood and lymph. The resorbability of sealers and pastes has been abundantly demonstrated by gross radiographic evidence. There is, therefore, no doubt that material is transported away from the site where it was originally applied."***

What has been shown as of equal or more significant importance is the relative sterility of the intra-radicular-canal system. Current research shows that the significant presence of bacteria in the canal systems lead to the pathogenesis of "Apical Periodontitis" (AP), this condition (AP) is a chronic/acute inflammation of the tissue about the roots of root filled teeth also designated as "apical granuloma."

Equally significant in consideration for successful endodontic procedures is the presence of bacteria within the microtubules of the dentin itself.

These concerns were reported in lectures in Chicago, and other cities in the 1930's and 1940's. Infected dentine was demonstrated to be of great influence on the lack of success of root filled teeth by Dr Weston Price, DDS.

Recent studies show that dentine can be infected.

Systemic implications are obvious from more recent work showing that Apical Periodontitis, an inflammatory process around the apex of a tooth root, is primarily a sequel to microbial infection of the pulp space of teeth and is a remarkably widespread problem.

It is calculated that apical priodontitis is so prevalent that by the age of 50, 1 in 2 (50%) experience the disease.

By age 62 the statistic rises to 62%.

In the United States it is estimated that 420 Million teeth have received root filings, or in the common vernacular "root canalled."

On this basis the average number of root fillings is 2.2 per adult.

Readily it can be understood that the magnitude of the problem is not fully comprehended nor appreciated as to its impact upon the general health of the individuals with this condition. Inflammation has been described as a common reaction of the body to damage of its cells and vascularized tissues.

The discovered detailed process of inflammation has revealed its relationship to immune response as being one in the same fundamentally.

The 5 Symptoms of Inflammation:

1. Redness (rubor)
2. Swelling (tumour)
3. Heat (calor)
4. Pain (dolor)
5. Loss of Function (functio laesa)

In a recent work, a close correlation to periodontal pathology and Rheumatoid Arthritis was found. In 62.5% of a study population of 1,412 people with Rheumatoid Arthritis, had Advanced Periodontal Disease.

The authors went as far as stating there are certain pathogenic similarities between the two clinical entities.

> *"There has been an increase in the number of case reports published in the medical literature citing dental infection as an associated factor in several systemic illnesses including:*
> *1. Uveitis (iritis, inflammation redness inside the eye) [Sela & Sharav 1979];*
> *2. Intracranial Abscesses [Holin 1967, Henig 1978, Ingham 1978, Churton & Green 1980, Aldous 1987, Marks 1988, Saal 1988];*
> *3. Childhood Hemiplegia (paralysis affecting one side of the body) [Hamlyn 1978];*
> *4. Cerebral Infarction (death of brain tissue due to a lack of blood supply) [Syrjanen 1989];*
> *5. Bacteriospermia [Bieniek & Riedel 1993];*
> *6. Subfertility [Bieniek & Riedel 1993];*
> *7. Necrotizing Fasciitis (bacterial infection in the tissue under the fascia) [Gallia & Johnson 1981, Steel 1987, Stoykewych 1978];*
> *8. Mediastinitis (inflammation of the mediastinum, area in the chest between the lungs) (Hendler & Quinn 1978, Zachariades 1988, Musgrove & Malden 1989);*

> ***9. Fatal Endocarditis (infection of the heart's inner lining, can be fatal) [Kralovic et al. 1995];***
> ***10. Toxic Shock Syndrome [Egbert 1987, Navazesh 1994];***
> ***11. Septicemia (infection in the bloodstream by bacteria) [Lee 1984]."*** *- in "Root canal treatment and general health: a review of the literature" International Endodontic Journal, 2000.*

Infections in the mouth can develop into chronic localized infections or systemic infectious disabilities; conditions we refer to as disease or illness.

In the pathogenesis and evolution of glomerular nephropathies, these localized infections play an important role.

Renal patients appear to be subject to a variety of dental problems such as periodontal disease, narrowing of the pulp chamber, enamel abnormalities, premature tooth loss and xerostomia.

Renal difficulties also often arise after a specific stomatologic (oral) treatment of dental foci. The Dental Infection, can localize in the pulp of the dental organ (tooth), developing acute gangrenous pulpitis.

With the advent of "modern endodontics" in the early 1950s and the commercialization of the dental profession, dental schools taught and encouraged the retention of the dead dental organ's shell (root canalled teeth), leading to the "save the tooth at all cost" era of dentistry for about 50 years, until year 2000.

In May 2001 "Scientific American", reported on the oral systemic linkage of oral bacteria found in the plaques of atherosclerotic patients, patients with hardening of the arteries: Atherosclerosis.

In 72% of the patient samples it was found that bacteria only found in the mouth had made their way through the vascular system and included themselves within the matrix of the vascular plaques.

The level of CRP—C-Reactive Proteins; were in some cases extremely high and might be a marker for the risk of heart disease.

Implicated in these patients were those with acute and chronic periodontitis, an infected inflammatory condition of the roots and supporting structures of the teeth. Research on the oral systemic linkage to good and enduring health reveals the potential deleterious effects of "modern root canal therapy" and "implant dentistry."

Apical Periodontitis is fundamentally equivalent to periodontal disease, implant mucositicgranuloma (dental implant failure), and may be termed, in fact, foreign body tissue reactions; "Cleansing Phenomenon", the natural physiologic pushing out of dead and dying tissues from within the human body. With this in mind, one may be wise to avoid unclean foods, water, air, and medical procedures." - Dr Ronald S. Carlson, DDS, in "Endodontic-Endotoxemia: Our Current Dilemma", Syntro-Research, 17 November 2008.

"E. faecalis is associated with different forms of periradicular disease including primary endodontic infections and persistent infections. In the category of primary endodontic infections, E. faecalis is associated with asymptomatic chronic periradicular lesions significantly more often than with acute periradicular periodontitis or acute periradicular abscesses. E. faecalis is found in 4 to 40% of primary endodontic infections.

The frequency of E. faecalis found in persistent periradicular lesions has been shown to be much higher. Failed root canal treatment cases are 9 times more likely to contain E. faecalis than primary endodontic infections.

Studies investigating its occurrence in root-filled teeth with periradicular lesions have demonstrated a prevalence ranging from 24 to 77%

This finding can be explained by various survival and virulence factors possessed by E. faecalis, including its ability to compete with other microorganisms, invade dentinal tubules, and resist nutritional deprivation.

E. faecalis possesses several virulence factors, its ability to cause periradicular disease stems from its ability to survive the effects of root canal treatment, and persist as a pathogen in the root canals and dentinal tubules of teeth.

*Factors that may contribute to a **persistent periradicular infection after root canal treatment include intraradicular infection, extraradicular infection, foreign body reaction, and cysts containing cholesterol crystals."** - in "Enterococcus faecalis: Its Role in Root Canal Treatment Failure and Current Concepts in Retreatment", Journal of Endodontics, February 2006.*

Disease & Food Choices

Vitamins

"Vitamins are activators or catalysts, that is, substances needed in small amounts to speed the chemical changes of digestion and assimilation.

Minerals

Minerals are needed to make some of the vitamins effective as well as to form structures in our bodies. It has long been known that we need fairly large amounts of such common minerals as Calcium and Phosphorus because they are the chief elements of bone. We get these minerals from animals, fruits, and vegetables.

Enzymes

Enzymes are substances produced by living cells. They are present in most of our fresh foods and are important to the digestion of food. Because they are destroyed by heat, we should include some uncooked food with every meal.

Adulterated Foods

Present trends in Farming and Processing, have gradually brought about changes in the composition of our common foods to the extent that some of them are not fit to eat.

Many of them are tampered with to make them look better or keep longer, with little regard to the effect on health.

A recent agricultural text by Seiden and Pflanders discloses that already **25% of our manufactured foodstuffs contain "supplements, drugs, and growth stimulants."**

For example, the use of poisonous sprays on crops and farm animals, the "altering" of poultry and livestock by glandular and antibiotic treatment, the refining and doctoring of cereals, and the chemical preserving of meats, cheese spreads, and salad dressings, as well as other practices unknown 50 years ago, present us with new dangers.

It has even been proposed that we preserve our food with "atomic radiation."

No doubt there will be still other schemes to make food easier to store and handle, but more dangerous to health.

Good health is largely a matter of body chemistry, and body chemistry is largely a matter of diet.

> ***"Today germs are not our principal enemy. Our chief medical adversary is what I consider a disturbance of the inner balance of the constituents of our tissues, which are built from and maintained by necessary chemicals in the air we breathe, the water we drink, and the food we eat. Persons who are afflicted with "rheumatism" or "cancer", for example, are not the victims of germs but of altered chemistry.***
>
> ***For a generation we have worked on the concept that our cells are never static and that in time they must be replaced in varying degrees by the nutrients obtained from food.***
>
> ***More specifically, our working hypothesis has been that all disease is chemical and, when we know enough, chemically correctable.***
>
> ***Malnutrition or under-nutrition may be either the cause or the result of ignorance and poverty.***
>
> ***A large part of human disease is chemical rather than bacterial in origin, and in diseases of chemical origin the trouble may be either excess or deficiency.***
>
> ***Twelve case histories are here given to illustrate the fact that deficiency states resulting from poor diets are still important and sometimes puzzling.***
>
> ***Mental symptoms disappeared when a man was finally treated with nicotinic acid for a long-standing dermatitis which was pellagra.***
>
> ***A man of excessively frugal habits suffered from spells of increasing weakness; he was able to return to work after a series of hemorrhages led to the diagnosis of scurvy, which was remedied promptly by the oral administration of ascorbic acid.***

> ***In many cases, however, the deficiency is more complex; the effect on the patient is a general biological blight, and a spectacular response follows the administration of complex foodstuffs such as dry milk solids.***
>
> ***In some deficiencies anorexia and glossitis are prominent symptoms; breaking this vicious circle with folic acid in one case led to the appearance of a voracious appetite and the complete restoration of a patient who had been near death from severe macrocytic anaemia.***
>
> ***The body cells can recover to an amazing degree from these chemical upsets.***
>
> *The deficiency diseases bring crushing burdens and stark tragedies.*
>
> ***All severe disease processes affect the metabolism of the tissues and, therefore, the nutrition of the tissues."*** *- Dr. Tom Douglas Spies, MD, in "Some Recent Advances in Nutrition", Journal of the American Medical Association, 7 June 1958.*

It is clear that part of our problem is to eat good foods, and another part is to avoid bad ones.

This intelligent course will protect our bodies from chemical upsets.

From study, observation, and experience, here are some of the common foods that I recommend to avoid or at least to restrict.

Refined sugar is useless in repairing or building the body, and it is one cause of tooth decay.

Even if you have no teeth, it can upset your chemical balance, thus inviting certain diseases." - Prof. Dr Victor H. Sears, DDS, in "New Teeth for Old", 1959.

Faulty Nutrition: The Influence of Diet, Need for Investigation

> ***"Admission to public hospitals increase 126%; to mental hospitals 105%. There was no more important factor for those interested in the physical welfare of the people than nutrition and it was becoming increasingly apparent that the diet of the people right from birth needed investigation."*** *- Sir James Elliott in 1938.*

The Power of Food And Its Effects In The Human Body

> ***"Diet Is A Part of the Necessary Treatment of Disease. A proper amount of food containing the elements necessary for body building is required to maintain standard health. Overindulgence brings on overstimulation, enervation, impaired nutrition from lack of secretion, and impaired elimination, ending in toxaemia; an insufficient quantity causes enervation and disintegration from dysemia, lack of balanced blood supply."*** *- Dr John Tilden, MD*

> ***"I believe Nutritional medicine to be the Mandatory medicine of the Next Century.***
> ***It is extremely effective, particularly in the early stages of disease, where Modern Medicine fails miserably. Its preventive approach is a guaranteed benefit; and last but not least, it is economically effective."*** *- Dr Derrick Lonsdale, MD, in "Why I Left Orthodox Medicine", 2014.*

Relation of Diet to Sound Teeth

"If we consider the first requisite, that of sound teeth, we find that they are dependent to a great degree upon the structure of the enamel; the teeth, like all other parts of the human organism represent the food materials that nature has utilized in their formation.

Correct Dietetics must be considered the fundamental principle of sound teeth, and therefore, the primary requisite.

What do the cells require from the food supply for the formation of a dense enamel structure?

So perverted his normal food supply by refining processes that all civilised peoples must pay the heavy penalty of defective bodies from early childhood throughout adult life.

How can the body secure its 12 Mineral Elements essential for growth, or how can good teeth be built when all of our cereal foods, such as wheat, rice, corn and oats are subjected to the refining process, and robbed of more than 75% of these mineral salts?

How can the body secure its 12 Mineral Elements when our vegetables are first peeled, and then boiled in water which extracts the juices, and mineral salts and which is invariably poured down the sink?

The Physiological Balance of Natural Foods Is Destroyed In This Way, and their utilization in the body is rendered imperfect.

All natural foods are designed chemically to maintain the normal neutrality, or slight alkalinity of body secretions.

This perfect arrangement of acid and base-forming elements results in an alkaline residue when oxidized during body processes.

The Refined Foods Have Had Many of Their Alkaline Forming Elements Removed, and our daily diet, therefore, contains a majority of acid forming foods. An excess of these Refined Foods produces Acidosis; a condition which indicates that the tissues are unable to secure enough Base-Forming Elements to maintain their Normal Alkalinity. These Tissues are Lowered in Resistance, and are Most Susceptible to Infection. There is no doubt, that the Demineralized Cereals, and Refined Sugar, in addition to Ignorance in the preparation and cooking of vegetables, Is The Cause, not only of Caries, but of many other Physical Defects.

Prenatal Feeding

The growth and development of the embryo during this period is entirely dependent on the contents of the blood of the prospective mother.

The blood is dependent on what she eats, and this eating must not alone supply her own physiological balance, but there must be sufficient additional intake of the essential elements to form a perfect body for the child.

The Calcium and Phosphorous intake is of especial importance owing to the huge quantity necessary for the new body under formation.

Now modern diet is deficient in these mineral salts.

For example, the following foods which are in very common use: Meat, boiled potatoes, white bread, white sugar, white flour, polished white rice.

These are practically free from Vitamins, Calcium and Phosphorous.

They are indeed practically mineral free, and result in acid formation owing to the absence of any neutralising alkalis.

Under these dietetic conditions the mother blood has to struggle to maintain its integrity and to supply the insistent demand for the essential elements.

Sooner or later then the cells of the mother are called upon to supply the necessary elements, this undoubtedly happens but much to the detriment of her bones and teeth. The increased tendency to Caries during pregnancy is significant in this respect.

Is it any wonder then that we find the modern civilised mouth in such an appalling condition?

Good teeth cannot be produced without Calcium and phosphorous in physiological balance.

The crowns of the deciduous teeth are already formed when the baby is born, and the mother's diet is the deciding factor as to whether or not these teeth’s are dense and perfect in structure. During this period then we must see that natural foods in contra distinction to the modern refined foods are absolutely essential.

Modern refining consists in removing most or in many cases all of the vital natural properties, for example, entire wheat which is a natural cereal food appears after milling processes as white flour, and about 75% of its Mineral Salts are removed, including Calcium and Phosphorous.

A practically pure starch remains with a little protein. Refined and processed foods are also acid forming because the alkaline mineral elements are removed.

The result of this is a tendency to acidosis and a consequent lowering of resistance and susceptibility to infection.

These foods are also wholly or partly lacking in vitamins, e.g., vitamin B is removed from all refined grains and cereals.

Pasteurization of milk and butter destroys most of the vitamin content.

White flour, corn flour, polished rice, white sugar and lard are all vitamin free. These foods are not in physiological balance and cannot therefore be perfectly utilised by the tissues. Pasteurization undoubtedly destroys more than the antiscourbutic properties of milk. The process is so unnatural and the chemistry of the changes so involved that it is difficult as yet to determine the actual result. Several clinical facts should cause us to look upon the efficacy of pasteurized milk with skepticism. Calves fed upon it will die.

The liability to scurvy is well known. There is apparently a detrimental effect upon the activating agent for the deposition of calcium.

Medical investigators report that the X-ray as well as a large number of autopsies show that there are few infants who do not present symptoms of rickets to some degree. Rickets is a nutritional disease characterized by changes in the bone structure due to imperfect calcification, with subsequent deformity.

In addition to this, muscular weakness and nervous disturbances develop.

The same metabolic disturbance which prevents the perfect calcification of bones will prevent the perfect calcification of teeth and, conversely, the factor in normal blood which stimulates deposition of calcium in bones will stimulate deposition of calcium in teeth.

The Unnatural Dietary of Civilised Nations

In spite of the food in a perfect state, which Nature has designed for normal nutrition, growth and health, civilised man, in defiance of all natural laws, has perverted this normal Food Supply through:

1. Ignorance,
2. Greed or Commercialism;

And reaped a reward of malnutrition, with consequent diseases and defects.

Refined and Processed Foods are:

1. Wholly or partly robbed of the elements for building perfect tissues. For example, entire wheat which is a natural cereal food appears after milling processes as white flour. During the milling more than three-fourths of its mineral salts are removed, including calcium and phosphorus. An almost pure starch remains, with a little protein. The natural brown rice kernel, during the polishing process to produce white rice, is robbed of its salts in a like manner, and this is true of all the grains, as pearled barley, de-germinated corn meal, and refined rye.

2. Acid-forming, because the alkaline mineral elements are removed. An Excess of Refined Foods Produces Acidosis — a condition which indicates that the blood is unable to secure enough base-forming elements to maintain its normal neutrality or slight alkalinity. The result is lowered resistance and susceptibility to infection. Examples of modern foods which are acid-forming are all refined starchy grains, as white flour, white rice, tapioca, corn starch, white sugar, etc...

3. Wholly or partly lacking in vitamins. Vitamin B is removed with the germ of all refined grains and cereals. Much of the vitamin-content of normal milk and butter is destroyed in pasteurised milk, and pasteurised butter. All three vitamins are lacking in white flour, corn flour, polished rice, white sugar and lard.

4. Not in physiological balance and, therefore, cannot be perfectly utilized by the tissues. In all Nature's food supply no instance can be cited in which a given food is purified starch, purified sugar or protein.

Oral Sepsis

Very many pathological conditions; are in whole or part due to the absorption of toxins and organisms from the mucous surfaces, the most important of these being the Gastro-Intestinal Tract.

Now this infection of the alimentary canal may exist without oral sepsis, but as might be expected where oral sepsis is present the chances of infection are greatly increased.

Let us, therefore, consider for a moment the powers and methods of action of these bacteria which are able to cause so much damage throughout the whole body. In the first place they may be divided into two distinct groups, Pathogenic and Non-Pathogenic.

The latter are those bacteria which, although present in the body, do not, under normal conditions, cause disease. Pathogenic bacteria are those which under certain conditions will cause disease.

These conditions depend on the relation of the virulence of the organisms and the size of the dose, to the resistance of the tissues.

Bacteria in their growth produce poisonous substances known as toxins, and these circulate in the body fluids and are carried to distant parts of the body where they are capable of producing severe general symptoms and lesions and often a general systemic disturbance out of all proportion to the size of the inflamed area of origination. In the case of mouth infections there is every evidence that the organisms and their toxins gain their access to the blood stream and so to the different parts of the body either directly into proximal blood vessels or else via the lymphatics.

So much then for the bacteria in themselves and their possibilities, but they alone do not constitute oral sepsis.

The facilities for putrefaction and the consequent inflammation are also necessary, also it must be remembered that the greatest danger exists in cases where these processes are of a chronic and lasting nature.

In other words, it is the long and continuous absorption of these bacterial toxins that constitutes the greatest danger to the general body health.

Before enlarging on the involvements of oral sepsis I will sound a word of caution. Oral sepsis is by no means a primary cause of many of the diseases with which it is often associated. There are other equally likely sources of infection. But even where Oral Sepsis is not a primary cause it has nevertheless an influence on the course and termination of the disease, and so deserves our close attention. Another interesting point in this connection is the explanation as to why many cases of very severe oral sepsis apparently produce no lesions in other parts of the body.

Diseases Due to the Absorption of Septic Products into the Circulation

Chronic Rheumatism: Cold and damp may predispose, but oral sepsis is the prime cause in many cases.

Rheumatoid Arthritis: In these cases or cause toxæmia the presence of organisms in the joints is the In most cases toxic absorption seems to be the most likely cause, and, of course, septic foci in the mouth are the most likely source of toxic absorption.

The following may also arise in the same way:

Arterio-sclerosis; arteritis; phebitis; neuritis; neurasthenia; and acute Bright's disease.

Pernicious Anaemia

Oral Sepsis is an important Factor in the Production of this disease, as it causes through the action of the absorbed toxins, an injury to the red blood corpuscles.

Debility

This condition where the patient is below par without any visible lesion being observed, where the symptoms are lack of energy, general malnutrition, sallow, unhealthy appearance, and loss of appetite, is most commonly associated with Oral Sepsis, and clears up satisfactorily upon the removal of the offending source of infection.

Diseases Influenced by the Presence of Oral Sepsis

Tuberculosis - Oral sepsis in children especially must be regarded as predisposing to tuberculosis. We must remember that the lymph glands are the defence provided by nature against tuberculosis, so that when these are infected from septic inflammatory conditions of the mouth and their resisting capacity lowered they are unable to deal with tubercle infection in an efficient manner.

The result then is that the tubercle bacilli are able to get into the system and reach the respiratory and gastro-intestinal tracts, there to find a position of diminished resistance, where they can remain and flourish.

Oral Sepsis Connected With Cancer

This disease up to the present has managed to keep its cause and origin a secret from the most painstaking research workers.

We have, Sir Arbuthnot Lane's assurance that cancer never attacks a healthy organ or a healthy tissue, and the most common and most generally accepted idea is that cancer is a disordered growth of epithelium caused by various physical or chemical irritants, the most common being the toxins of organisms.

Dr F. St. J. Steadman, MD, produced significant clinical observations and good evidence, in "Oral Sepsis as a Predisposing Cause of Cancer", Proceedings of the Royal Society of Medicine, 1914, on how Oral Sepsis is a predisposing factor in the causation of certain types of cancer.

Thus, Oral Sepsis is Definitely Associated with Cancer, in other words, that: The primary damage to the tissue cells is caused by the toxins originating from Dental Sepsis. He examined 143 cases of Cancer, and found that the degree of sepsis present was represented by a control figure equal to 92.54% of the highest amount of sepsis possible.

In a control with 415 patients free from cancer the figure given was 49% of possible Sepsis.

These figures show that: There Is a Greater Degree of Oral Sepsis Present In Patients Suffering from Cancer, than in those free from this disease." - in "Solving the Problem of Preventive Dentistry", New York State Journal Of Medicine, 28 March 1924; "Preventive Dentistry for Dental Students", 1925; "Oral Conditions in Relation to General Health; Influence of Ailments on the Oral Cavity", The Mouth Mirror, March-December 1929.

Oral Sepsis A Major Factor in Cancer

"For some time past clinical observation, both by medical men and dental surgeons, has shown that Malignant Disease is liable to occur in parts of the body which have been the seat of long-standing Chronic Sepsis.

There is little doubt that in many cases a simple ulcer is present for some time, associated with sepsis, before malignant change occurs.

Very many other authors could be quoted, showing that it is well established that long-standing chronic inflammation in any part of the body is liable to be followed by malignant disease.

For instance, Mr Sampson Handley states:

> ***"The most important factor in the production of breast cancer appears to be chronic mastitis."***

It has come to be recognized that Chronic Sepsis (caries, rotten teeth, etc.) predisposes locally to Malignant Disease, up to the present time it has not been realized what a profound influence chronic septic conditions of the mouth may have upon the production of Cancer in more remote parts of the body. I am of opinion that Oral Sepsis is by far the commonest predisposing cause of Malignant Disease. I showed that; 85.1% to 86.5%, occurred in the Alimentary Canal, and its associated parts; i.e., those parts to which infection from the mouth can spread either by continuity of tissue, or along ducts or lymphatic vessels. If Oral Sepsis is the commonest Predisposing Cause of Cancer, these figures show exactly what we should expect; namely, that the great majority of cancers occur in those parts of the body most readily infected from the mouth.

I want to emphasize that nearly 92% of these patients suffering from Cancer had had Periodontal Disease for a great number of years.

The evidence for the statement that Oral Sepsis, may Produce a Chronic Gastritis, Is Overwhelming.

It is the almost daily experience of surgeons, physicians, and dental surgeons that: The Removal of Septic Teeth Will Frequently Cure a Chronic Dyspepsia.

> ***"The symptoms of chronic gastritis are essentially those of a chronic gastric dyspepsia, since that is the usual morbid state underlying the clinical complex known as chronic gastric indigestion, when that malady is not purely nervous in origin. It may become established as a sequence of acute gastritis, or may slowly develop without any definite commencement, as the result of obstructed portal circulation, of continued infection from Oral Sepsis, or in the course of Chronic Toxaemias, such as gout, chronic nephritis, etc."*** *- Sir W. H. Allchin, MD, in "Encyclopaedia Medica", Vol. 11, 1902.*

I do not for one moment overlook the other Modes of Conveyance of Infection; i.e., by the Blood-Stream, lymphatics, by contiguity, - nor the effect on the mucosae of the excretion of toxins developed elsewhere.

1. Over 86% of cases of Cancer occur in the Alimentary Tract, to which infection from the mouth is readily conveyed.

2. That long-standing Chronic Inflammation, in any part of the body, is known to Predispose to the Development of Malignant Disease.

3. That the great Majority of persons suffering from Cancer in the Alimentary Canal, have Advanced Periodontal Disease, which has been present very many years.

4. That this advanced periodontal disease, is not nearly so common in persons not suffering from cancer.

5. That it is well established, that the constant swallowing of pus can, and does in many cases, bring about chronic gastritis.

6. That the Majority of patients suffering from Cancer of the Stomach, have had Chronic Gastritis for many years, Prior to the Development of the much more Serious Disease." - Dr F. St. J. Steadman, MD, in **"Oral Sepsis as a Predisposing Cause of Cancer"**, Proceedings of the Royal Society of Medicine, 1914.

Disorders Instead of "Diseases"

"Abdominal Reflex Disorders: Influence Exerted by Disturbing Emotional States on the Autonomic Nervous System, and the Secondary Effects Thereof.

Frequency of Abdominal Disturbances, Particularly of the Digestive Type, Having a Neurotic Basis.

I employ the term "Disorders" instead of "Diseases"; advisedly because of the frequency with which complaints referred to the abdomen prove on investigation to be Functional or Reflex.

1. The arrangement of the somatic nervous system is especially adapted for localized accurate reflexes, whereas the visceral system is for more widespread diffuse effects.

2. Every Biologist and Physiologist, knows that: Balance Between Opposing Forces; In the Organism Is An Essential Of Its Existence.

3. This Is True of the: Endocrine Glands; And there is good reason to suspect that: Every Portion of the Whole Body; Influences Every Other Portion, Either For Good, or Ill.

4. Stimulation And Regulation: Are in some degree; A Function of All Tissue.

5. In no mechanism is this so plainly evident as in the Autonomic Functions, and they Exert a Profound Influence on the Welfare and Functional Good Health of the individual.

Understand The Way Reflex Abdominal Symptoms Come About

1. Before we shall be in a position to understand the way Reflex Abdominal Symptoms come about, we must take into account: Certain Important Peculiarities of the Reflex Arc, in the Abdomen.

2. The General Sensorimotor Nervous System: consists of parts of Neurons the Cells; of which lie-within the Brain, or Spinal Cord, and they respond to stimuli at once, the delay being measurable in small fractions of a second.

3. An important difference exists in the constitution of the autonomic apparatus.

4. This System is made up of Neurons reaching out from the Brain, or Spinal Cord, and they are Not Distributed Directly to the Viscera (internal organs and colon), But are Gathered Into Ganglia or "Transformers", which are believed to Modify the Impulses received from the Central Nervous System, and adapt them to the peculiar more slowly acting tissues Secreting Cells, and Visceral Muscles to which the postganglionic fibers are finally distributed.

By reason of this arrangement the response to stimuli is in the autonomic system slow, and diffuse, rather than rapid and local, the delay being measurable in seconds.

5. The Internal Organs Are Not Themselves Sensitive To Painful Stimuli, but They Can Cause Pain By Reflex Stimulation in the Central Nervous System of Nerves Supplying Other Tissues to which Parts the Pain Is Referred.

6. Another important consideration is that: The Ramifications of the Abdominal Network result in each Organ Influencing Reflexly Other Organs, and If The Reflex Action be Sufficiently Strong; Function May Become Perverted in the Organs so Affected.

As a result of these Nervous Reactions, and Interactions, it often comes about that long before any change can be detected in the structure of an organ reflex sensory and functional symptoms have been in evidence.

1. Chronic Heart Lesions.
2. Kidney Lesions.
3. Central Nervous Disease.
4. Tuberculosis.
5. Chronic Oral Infections.
6. Nasopharyngeal Infections.
7. Anemias.
8. Intestinal Parasites.
9. Hemorrhoids and Anal Fissure.
10. Kidney and Ureteral Stone.
11. Pelvic Infections.
12. Neoplasms.

And many other discoverable conditions (to say nothing of the habitus of the patient), enter into the proper evaluation of abdominal symptoms.

There is little doubt, that the:

1. **Anxieties.**
2. **Worries**
3. **Griefs.**
4. **Disappointments of complicated strenuous present-day existence.**

Are in some measure activating and setting in motion his autonomic safeguards. You are all familiar with Such Manifestations in these individuals as:

1. **Fatigue.**
2. **Backache.**
3. **Headache, with the Palpitation.**
4. **Cold Hands.**
5. **Rapid Pulse.**

Which of late has become known as "Neuro-Circulatory Asthenia", and especially common is: Nervous Dyspepsia with Spastic Constipation. Above all, Surgical Operations On Neurotics, and particularly on those displaying the asthenic habitus, Should Be Avoided unless absolutely necessary. Fortunately, thoughtful surgeons realizing this are more and more restricting their operations to definite organic lesions." - in "Abdominal Reflex Disorders", The Med. Clinics of North Amer., 1921.

Reflex Disorders of Dental Origin

"Reflex Disorders of Dental Origin: cover a wide field in both Sensory and Motor Disturbances Throughout the Body; Varying in latitude from pain referred from one tooth to a neighbouring tooth, to referred pain in a limb terminal, from slight twitching of near muscles, to pronounced Epileptiform Seizures, or Paralysis. Manifestations of Nervous Disturbance, Having Their Origin in Dental Diseases. There are features of some degree of constancy which have occupied the attention of nearly every dental practitioner. **These are the Reflex Disturbances arising from Diseases of the Pulp.**

Reflex Disorders

Reflex pains do occur in connection with Diseases of the Pericementum (periodontal membrane, the fibrous connective tissue layer covering the tooth's cementum), but by far the greatest number of cases are found associated with Diseases of the Pulp.

The reason for this is fully set forth by Professor G. V. Black, MD, DDS, in "Diseases of the Peridental Membrane", The American System of Dentistry", Vol.I, 1886. As pointed out by Dr Black, affections of the Iris (Eyes) have an almost constant point of reference to the brow, those of the hip-joint to the inside of the knee, and so on.

This same constancy is observed in connection with the vast majority of acute pulp-diseases; the pain, being rarely localized in the affected tooth (except in cases of acute and sthenic pulpitis), is referred to some point or points of the corresponding nerve-trunk of the same side.

The general rule being that the affections of the pulps of the lower teeth have pain reflected to some point of the course of the inferior maxillary nerve, frequently in the auriculotemporal branch.

Pulp-diseases of the upper teeth are most commonly attended by pain in some point of the superior maxillary nerve.

In connection with either, pain may be referred to the first branch of the 5th nerve; this latter reflection is to be regarded as the first of the remote references.

The next reference is to the ear, where not only sensory disturbances may be noted, but also those of special sense.

Next in point of frequency are affections of the eye.

While **many of these are clearly traceable to reflex disturbance of the ciliary ganglion, there are others in which the second cranial nerve is involved.**

That is to say, while pain is usually confined to the ramifications of the 5th nerve, it may be referred to other nerves whose function is then disturbed; to the 2nd, resulting in functional diseases of the retina; to the 3rd, 4th, 6th, and 7th, in which cases motor disturbances of the muscles about the eye, and head are noted; **to the 8th, producing disorders of hearing; to the 9th and 10th, when disorders of the tongue, pharynx, larynx, and other parts may be noted**, as recorded in dental literature.

The spinal nerves may be affected, resulting in painful diseases of distant parts: the uterus, a thumb, or even a toe.

In addition to these should be mentioned the functional disorders of the cerebrum itself, cases of which have been recorded.

In Chronic Diseases, notably in connection with chronic degenerative changes, Reflex Disorders are common; and vice versa in diagnosis; localized pains about the jaws point to the more acute diseases of the pulp; Distant Pains Arouse Suspicion of Chronic Diseases of the Organ.

The Dental Diseases to which such pains are traceable to 4 groups:

1. Reflex Disorders due to the irritation of the hypersensitivity of dentine.
2. Those associated with acute pulp-diseases.
3. Those arising during the progress of chronic pulp-diseases.
4. Reflex Disorders due to diseases of the pericementum.

While it is certain that **almost any of these dental causes may be associated with almost any extent of nervous transference, it is extremely probable that pains may be and often are ascribed to a dental source where their true origin lies in other organs. The Teeth May Be The Seat, as well as the Source of Reflex Pains.** This is notably true in patients who suffer from chronic malarial poisoning, from gout, and in some cases from secondary syphilis.

In the Gout cases, it is more than probable that **pathological conditions exist in and about the teeth, to which general dental pains are due.**

Dental Origin of a Distant Pain

Does the pain disappear promptly upon the correction of the dental disease without any other treatment?

The vast majority of localized pains about the head and face, are due to diseases of the eyes and teeth. Those of the eyes are most frequently located in the 1st division of the 5th nerve, and, as stated, those of the teeth in the 2nd and 3rd branches. **These rules are open to many exceptions, but serve as directing signs in the location of the causes of facial and cranial pains.**

The vast Majority of the Common Neuralgias, with defined painful areas about the Head, Are Due to one of these Dental Disorders.

Pain in front of the ear, in the ear, pain over or in the eye, with a disposition to press upon the eyeball, tender spots in the occipital region, or in most of the cases of pain at the points of nerve-emergence, **all point to a Reflex Disorder having a Dental Origin.**

The dentist should in Neuralgic Cases, Correct or Remove All Dental Disorders to which Reflex Neuralgias are attributable.

Reflex Cranial and other Neuralgias are also associated with diseases of the Pericementum (the periodontal, is the thin, fibrous connective tissue layer covering the tooth's cementum, anchoring it to the jawbone.

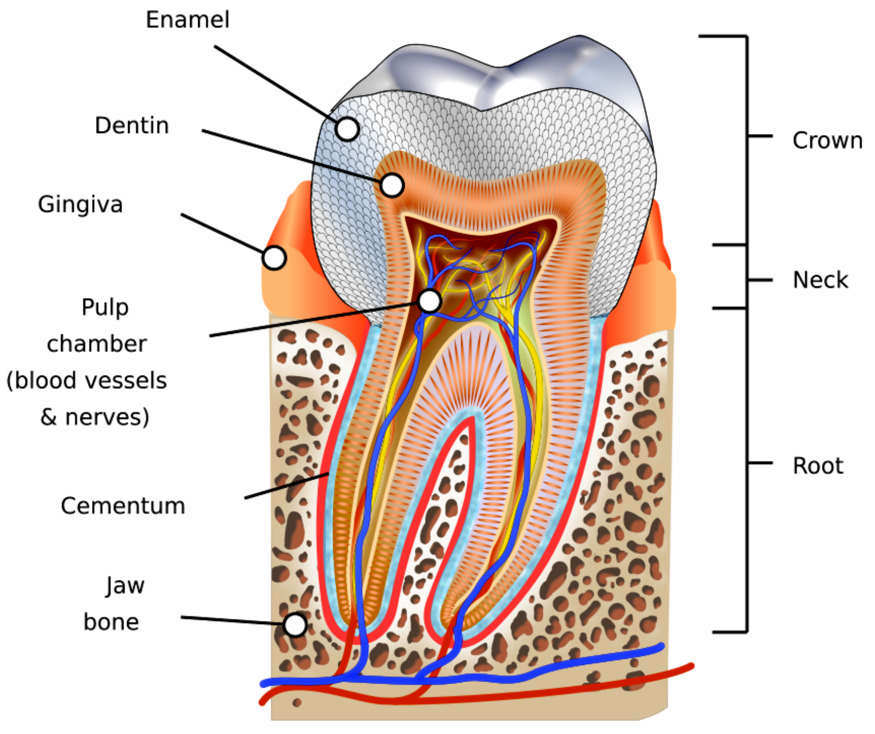
It is crucial for tooth support, nutrient transport, sensory feedback, and tissue maintenance); the classes of **pericemental affections giving rise to them are both Septic and Non-Septic.**

Many Reflex Neuralgias are Directly traceable to the existence of Septic Conditions about the Roots of Teeth, the proof of the casual association being brought to light by the disappearance of the reflex disturbance when the Septic Condition about the Root Is Remedied or the Tooth is Extracted." - Dr Henry H. Burchard, MD, DDS, in "The International Dental Journal", November, 1898.

Diseases of the Peridental Membrane

"The peridental membrane covers the root of the tooth, and serves to unite it with its alveolus.

I will describe the gingivae in connection with the diseases which have their beginnings in them.



Human Tooth
[Author: KDS4444, Wikipedia]

I will describe **the Gingivae In Connection with the Diseases which have their beginnings in them.** The blood-supply of the pulp of the tooth, and its peridental membrane is admitted to the apical space, usually, by a single arterial twig for each root. Just at the rim of the alveolus there is a pretty rich plexus formed by union with the arteries of the periosteum and of the gum: **the Gingival Plexus. The peridental membrane is the organ of touch of the tooth**; the enamel has no sense of touch. And the pulp is so encased within the hard structures of the tooth that it could not exercise the sense of touch if it possessed it. The teeth are normally well supplied with nerves and blood from at least two different sources, and that, though one of these sources of supply may be cut off, they seem not to suffer materially on that account — at least, this is the case with the peridental membrane. Now, the cementum of the tooth is supplied with nutrient material from the peridental membrane. It follows that the loss of some of the avenues by which this nutrient material may reach it will not materially impede its continued nutrition, and therefore will not materially lower its standard of health. This agrees substantially with what is seen in daily clinical experience. Teeth that have lost their pulps, go on decade after decade continuing in the most perfect health. The sense of touch remains perfect; the connection of the tooth with the neighbouring parts shows no signs of disturbance.

Diseases of the Peridental Membrane

One of the first things that the student should recognise in the study of the pathology of the peridental membrane is the fact that it is subject to various forms of disease. In the pathological processes of absorption the excitation is undoubtedly furnished by some local irritant which acts more or less continuously. In all cases that have come under my observation the tissues in the immediate neighbourhood of the destructive process have been found hyperaemic and presenting the macroscopic appearance of granulation-tissue.

The peridental membrane is the organ of touch of the tooth, and therefore definitely locates its ailments. The pulp of the tooth is not an organ of touch, and therefore does not definitely locate its ailments, but is especially prone to cause reflected pain, or pain referred to associate or distant parts.

This is characteristic of the diseases of those organs that have no nerves of touch, as is seen in pain referred to the knee in hip-joint disease, pain referred to the region of the scapula in disease of the liver, pain referred to the brow in inflammation of the iris, etc.

This peculiarity occurs so frequently in diseases of organs having no sense of touch as to make it a general law of symptomatology. Another point of prime importance is the fact that the dental pulp is especially sensitive to thermal changes, and that this sensibility is markedly increased in its diseases.

The Treatment of alveolar abscess in the vast majority of cases presents but little difficulty. **It consists in the simple cases in the removal of the irritant that has acted as the cause; i.e.; Septic Matter from the pulp-chamber of the affected tooth.** Constitutional treatment in the graver forms of acute alveolar abscess should not be overlooked nor neglected. The nature of the affection is not such that it can be cured by the internal administration of remedies, and that is in no wise the object of medication, but rather to limit the intensity of the inflammatory action on the one hand and to promote the healing process on the other.

It may also have for its object the mitigation of the pain. In very many of the cases that present themselves for treatment the inflammatory process will have reached its height — that is, it will begin to abate at once — on the discharge of the accumulation of pus; and in this case nothing can be done by the use of internal remedies to limit the extent of the inflammation. This has been an argument against the use of internal medication. But even in the cases stated internal medication may still save portions of bone from necrosis by the more ready reduction of the oedematous swelling and the quicker restoration of the normal circulation of the parts. **The duration of the inflammation is almost as important a factor in the production of necrosis as its intensity; therefore in all cases of considerable severity of the inflammatory process the local treatment should be supplemented with an active saline cathartic (purgative), as an aid in the speedy reduction of the oedema and induration of the parts, with the view of the quicker restoration of the normal circulation to the alveolar borders and such other tissues as may be endangered.**

This treatment will also contribute much to the comfort of the patient by reducing the duration and intensity of the suffering. I do not insist that the cathartic should be saline, but it should be such as will produce large watery stools and be prompt in its action.

Gingivitis

There is often some eversion of the gum, and the pockets thus formed are filled with the peculiar mucus-corpuseles, pus-corpuscles, and the usual micro-organisms of the mouth. This inflammation seems not to assume a destructive character. There is little or no separation of the tissues from the necks of the teeth, and the difficulty is usually transient, lasting but a few weeks. In those cases, however, where there is a disposition to accumulations of calculus or other irritating substances, it may serve as the starting-point of a more permanent local irritation; it therefore requires the attention of the dentist. **It will always be favourably modified by habits of cleanliness, and will soon pass away without other treatment; therefore the removal of the accumulations is usually all that is indicated. Of course the patient should be instructed in regard to the matter of keeping the parts well cared for. Some cases will be met with in which a brisk saline cathartic as an eliminant will be advisable, and this may be followed by the vegetable acids with advantage, or this purpose I have found nothing better than oranges or lemons; indeed, in all of this group of diseases these fruits seem to exert a very salutary effect. There is but little doubt that simple gingivitis is often the starting point of the more grave diseases of the peridental membranes.**

Calcic Inflammation

(inflammation resulting from the buildup of calcium crystals in soft tissues)

Calcic Inflammation of the Peridental Membrane and Gums:

I use the term Calcic Inflammation of the peridental membrane and gums to express that condition in which inflammation of these parts is caused and perpetuated by deposits of calculus on the necks of the teeth. This constitutional vice may be favoured by conditions of the teeth themselves, by their form, by irregularities in their arrangement, by the condition of the gums, as in the swollen state found in simple gingivitis, by vicious personal habits, such as want of cleanliness, and by the use of soft foods which require but little use of the teeth, etc. **Calcic Inflammation is really one of the most grave of the diseases of the teeth; not that it is so very difficult of management when rightly understood, but from the great number of cases that occur and its insidious character, by which it so often destroys the denture before the patient is aware of the danger. Within my observation it is causing the loss of more teeth than is caries. The subject, therefore, merits the closest possible attention."** - Professor G. V. Black, MD, DDS, in "Diseases of the Peridental Membrane", The American System of Dentistry", Vol.I, 1886.

Reflex Action as a Cause of Disease

"Reflex Action is the effect produced by an impression made upon a sensory nerve, transmitted by that nerve to a nerve-centre, and reflected or thrown back along a motor nerve. Another instance in which voluntary muscles are reflexly affected is seen in the acts of coughing and vomiting.

Coughing is adapted for the purpose of expelling irritating substances from the respiratory passages, and thus preventing their injuring the organism, just as the act of winking is adapted to remove injurious substances from the eye.

Coughing is usually excited by irritation of the nerves of that part of the body from which the irritant is to be removed.

An interesting case is described by Dr Teevan, MD, in the "Practitioner", October 1876, where a boy had been treated in vain by medicine, but was at once cured by healing a fistula in ano from which he had been suffering, the irritation produced by it appearing to have been the real cause of the incontinence.

We will now pass from **reflex changes in the respiratory and intestinal tracts, to reflex changes in the blood-vessels and heart.** It is well known that, usually, irritation of a sensory nerve causes dilatation of the vessels in the part supplied by that nerve, and contraction of the vessels in the other parts of the body.

This may take place without any alteration whatever in the beats of the heart itself; **but if the irritation be very strong, or applied to certain nerves, the heart also may be acted upon.**

There seem to be certain nerves which act more readily upon the heart than others, and more especially is this power possessed by the 5th nerve, the roots of which are very closely associated with those of the vagus.

The most important nerves through which the vessels are reflexly contracted are the Splanchnics (viscera the internal organs, primarily those in the Abdomen: stomach, intestines, liver, spleen), and the contraction of the abdominal vessels which they supply has much more effect in altering the general pressure of blood throughout the arterial system than the contraction of any other vascular district in the body.

But although the abdominal vessels are the chief ones concerned in alterations of blood-pressure, yet local alterations in the various organs may have an even more powerful action upon the nutrition of these organs themselves: for it is probable that although the abdominal vessels may be caused to contract by powerful stimulation of almost any sensory nerve, yet that the blood-vessels in different organs of the body, such as; the kidneys or mucous membranes, are more affected by irritation of some nerves than of others.

Congestion of the kidneys in horses is caused by exposure of the loins to rain, the action of cold upon that district of the general surface having a peculiar effect upon the kidneys, not produced by its application to other parts of the body." - Dr T. Lander. Brunton, MD, FRS, in "Reflex Action as a Cause of Disease and Means of Cure", Brain, July 1878.

Neurosis and Reflex Disorders

"The Circulation Is Closely Linked With the Emotions, not only the Heart but the Peripheral Vessels with their large muscular walls.

In Joyous Emotion we find the peripheral vessels dilated, the extremities warm, and the heart beating vigorously.

On the oposite, Dread and Anxiety contract the arterioles, the face is pallid and the hands are chill, the blood-pressure in the arteries is heightened and the renal secretion is profuse.

The Emotional State probably also affects the Cardiac Ganglia.

Some persons possess a power of voluntary control over these emotional disturbances of their vascular system, which is called coolness.

This power of voluntary control over the circulation exists in some persons to a very marked extent, even to the arrest of the heart's action.

The well-known case of Colonel Townsend, has often been alluded to by different writers. He possessed the power of arresting the action of his heart,'and at last killed himself by an exhibition of it. Disturbance of the heart's rhythm may also be induced by pressure on the vagus nerve.

The famous Czermak, of Prague, had a tumour in the neck lying over the vagus.

By pressing this tumour on the nerve, the heart's action could be slowed, or even arrested.

Neurosal palpitation of the heart may be: Primary or Reflex.

The reflex forms of palpitation are very common.

They are often due to uterine disturbance, and still more frequently to ovarian trouble; but they may be produced by some condition of the stomach, or of the intestinal canal.

In nerve disturbances the perturbation is not felt where it commences, but where it runs out.

The localised spots of pain connected with visceral derangement are well known.

In liver derangement, pain is often felt in the terminal cutaneous twigs of the acromial nerve at the point of the right shoulder, or in a twig of the sub-scapular nerve under the right shoulder-blade.

So in ovarian disturbance waves of nerve perturbation are set up which traverse various nerve fibrils, and cause different results according to the route pursued and the track taken.

If the wave passes to the stomach, we have dyspepsia (Ovarian Dyspepsia, "American Obstetrical Journal", 1 January 1878); if to the cardiac ganglia, we get palpitation: and both these maladies, to which women are so much more liable than men, are commonly reflex, and due to the condition of the ovaries.

Or it may travel to the respiratory centre and set up a neurosal cough.

At other times it passes out at the cutaneous terminations of the facial nerves, or of the intercostals, especially the 6th and 7th, where it is felt as a gust of neuralgic pain.

This is the explanation, in all probability, of the “pain under the heart,” so commonly complained of by women.

In reflex palpitation of the heart, it is essential for successful treatment to bear in mind its causal associations.” - Dr Milner Fothergill, MD, in “The Neurosal and Reflex Disorders of the Heart”, Brain, July 1878.

Clove Oil

Clove Oil: Provides temporary toothache relief by numbing nerves with its active ingredient (Eugenol), and reducing inflammation; use it by applying a tiny amount with your finger to the sore area, from the outside of the mouth, that is on your skin, not inside the mouth, as it is very unpleasant, pungent.

It contains Eugenol, which acts as a powerful, Natural Anesthetic to numb dental pain.

Side effects include gum irritation, burning, and stomach upset if swallowed.

It is crucial to see a dentist, as it doesn't fix the underlying problem, like decay or infection, but only masks the pain temporarily.

Chapter 16

Epilepsy

"Cases of Epilepsy it is said that by far the largest majority of the seizures are caused by the Grand Mal seizure, while approximately 25% are from Petit Mal attacks. Psycho-Motor attacks account for 18%, displaying different combinations." *- in "Migraine and Epilepsy", 2011.*

Each and every condition of Epilepsy, has at its base 1 of only 3 Factual Causation:

1. True Epilepsy (Grand Mal)

"The leading and pathognomonic features of true epilepsy are these: loss of consciousness and sensibility, most frequently accompanied by convulsions of the kind which I have described as epileptic, i.e. of movements which consist of alternate relaxations and contractions of muscles rapidly succeeding each other: these paroxysms occurring at intervals of variable length, with something of periodicity, the patient during the interval recovering himself completely. These phenomena are most frequently ushered in without any warning whatever, so that the patient is suddenly, and on the instant, seized, rendered senseless, more or less violently convulsed, and then awakes more or less suddenly. In many instances all this is done in scarcely as much time as it takes to describe the phenomena; at other times the fit is of much longer duration. 1. The sudden occurrence of complete loss of consciousness.
2. The sudden privation of voluntary and locomotive power, with more or less violent epileptiform convulsions. 3. And all this occurring at certain periods, with more or less uniform and regular intervals, during which the patient may, and frequently does, return to a condition perfectly normal." *- Dr R. B. Todd, MD, in "The Lumleian lectures", 1849.*

2. Colonic Epilepsy "Abdominal" (Petit Mal)

"The ancient name for many of the seizures of this group is epilepsy.
The second type of seizure is a headache possessed of certain characteristics.
The popular name is "sick headache; the medical term is "Migraine."
These 2 disorders are brought together for several reasons: First, they belong together."
- in "Science and seizures; new light on ***Epilepsy and Migraine****", 1941.*

***"Abdominal Epilepsy and Migraine."** - in "JAMA", 1973.*

3. Life is a Continuation (Psycho-Motor Epilepsy)

In Emunctology School the Emunctologist becomes fully aware, and it is Clinically Trained in each specific type of Epilepsy.
Then it is the responsibility of each Emunctologist; to correctly identify each type of Epilepsy in order to make the correct application of Therapeutics.
Epilepsy may be seen as one in its appearance of symptoms, but dependent on its origin of causation, the Protocols of Treatment become specific.
He who knowns how to Treat all Forms of Epilepsy, possess that understanding of how a physical body becomes afflicted, or is afflicted by so-called "Disease"; thus he is capable of Treating all Diseases of the flesh!
For Humans, are indeed: Spiritual Beings; having a Physical Experience.

All cases of Disturbances, and or Conditions, which have at their root cause in that, which is from the angle of; Life is a Continuation, such as all Psycho-Motor Epilepsy's, these are best, then, to be Treated by the Hospitallers Order of the Good News. For indeed, there are Karmic Forces, and there is also Material Cause and Effect, though Cause and Effect to many are the same as Karmic.

Yet, Karmic is that brought over, while cause and effect may exist in the one material experience only. The law of cause and effect is as the law of time and space; for cause and effect are one.

Thus the Emunctologist should indicate these cases to receive both Guidance & Treatments, to Only those who Seek.

Epilepsy And Its Treatment

"I express this opinion, moved as I am with the belief that; Epilepsy is not a disease of the brain. It has been the aim and the desire of pathologists to discover somewhere in the nervous system of the epileptic some abnormal condition, and thus account for the violence of the symptoms so characteristic of this condition. Quite naturally we have rested upon this theory until we are convinced, even in the absence of reliable data, that the disease is situated in the brain, but it does not follow that this must be so merely because the symptoms are of a cerebral origin, or of a Character Denoting Cerebral Irritation.

In support of this statement I would observe that the **symptoms of Epilepsy may depend upon, and be excited by, a Toxic Condition of the System, in a manner similar to the development of the convulsive seizures in so-called Uraemia.**

In the latter case it is known that the convulsion depends upon a form of Toxaemia, and not upon any pathological change in the brain or spinal cord.

The convulsions of children, which frequently announce the onset of an Acute Infectious Disease, are an example of the Effect of a Toxic Substance Upon a Susceptible Though Healthy Nervous System.

The same observation may apply with equal force to the convulsions of infants occurring during teething.

This theory of the Toxic Origin of Epilepsy is not new, for Robert Bentley Todd of England advocated the view in the year 1854.

In the light of our present knowledge, I am justified in holding, with some degree of confidence, to the Toxic Theory of the Origin of Epilepsy.

We have failed to recognize **the symptoms in these cases, usually prominent, indicating Disturbance of the Digestive Functions, and upon which the Disturbed Mental condition solely depends.**

These attacks may be preceded by retarded stomach digestion or abnormal intestinal digestion, though usually the latter condition prevails, and may be recognized by the ordinary symptoms denoting disturbance of the digestive functions. The attack is usually ushered in by the patient exhibiting for some time previously an abnormal, even ravenous, appetite.

There is the coated, frequently furrowed, tongue, the characteristic offensive epileptic breath, and a history of Constipation.

Convulsions may or may not precede or follow the appearance of these symptoms, but disturbance of the mental function is inevitable, and the attack continues until the exciting cause is removed, viz., Acute Intestinal Toxaemia.

It is pertinent to the subject to remark that the intestines play a vastly more important part in the digestion of food than does the stomach; and likewise disturbance of intestinal digestion results in proportionately graver consequences.

In disturbed stomach digestion food is quickly thrown off, affording, therefore, little opportunity for putrefactive changes to develop here.

On the contrary, in the intestines many conditions are present which tend to favour the development of putrefactive changes.

The question arises, What conditions tend to produce this derangement of the intestinal function?

As it would be inappropriate to enter here into a discussion of the subject, I would merely allude to one of these chief factors, viz., chronic catarrhal inflammation of the intestinal mucous membrane.

As Professor Charles Bouchard aptly expresses it:

> ***"Man is but a receptacle and a laboratory of poisons. The human body is the theatre of the toxic elaborations carried on by the normal microbes, which constantly inhabit the alimentary canal."*** *- in "Lectures on Auto-intoxication in Disease; Or, Self-poisoning of the Individual", 1894.*

Such is the hypothesis, I advance to Account for the Various Disturbed Mental States that are prone to complicate Epilepsy, and when Treating of its Therapeutics, we shall see upon what foundation it is based. In speaking of Epilepsy, uncomplicated by psychical phenomena, I wish to exclude all the traumatic and reflex disorders and refer only to Idiopathic Epilepsy, a point upon which I have but few remarks to make.

Idiopathic Epilepsy is characterized by the appearance of convulsive seizures, more or less severe, and occurring at irregular periods.

In the interval between the seizures the individual is in a comfortable and normal state, and, excluding a certain degree of dementia, **there appears not the slightest manifestation indicating disease of the brain, nor does the most careful examination, post mortem, discover any trace of abnormality.**

It is at least as reasonable, to attribute the convulsive seizures to the action of Toxic Substances Accumulating in the System, and at intervals exerting an Irritating Effect Upon the Brain.

I would offer the suggestion that, **in idiopathic Epilepsy some normal product of digestion, peptone for example, possibly gains access to the circulation through an unnatural channel, which, not being properly elaborated, acts as a toxic substance; or possibly the same result may come from the gradual accumulation of an albumin, globulin or toxic serum, allowed by some error in the elaboration of digestive products. Thus we may account for the presence of a substance in the system exhibiting Toxic Properties, which, however, does not develop as the result of putrefactive or fermentative changes in the intestinal canal. Evidently in certain cases of simple idiopathic Epilepsy we must concede that the disease does not develop from, nor is it dependent upon, the formation of Toxic Substances resulting from indigestion; for these patients appear to possess healthy and functionally normal digestive organs.**

Undoubtedly the tendency to the Epileptic condition rests primarily upon some peculiar instability or susceptibility of the nervous system, which possibly, in some instances, may be acquired, but probably in the majority of cases is inherited. Consequently the individual thus afflicted can offer but little resistance to the influence of Toxins.**The remarks above, referring to the important influence that the digestive functions exert over the Epileptic**, apply with a special force to those cases prone to attacks of psychical disturbance; for as I have explained this **complication in Epilepsy, whether it be an acute maniacal attack, the confusional state called "doubled consciousness", or the condition Status Epilepticus, all depends upon an Auto-Toxaemia, the result of retarded or disturbed digestion, especially intestinal, a complication that may be controlled by proper diet. Epileptics suffering from the psychical manifestations of the disease respond readily to treatment based upon the theory of the Toxic Origin of the attack.** It is observed, however, after removing the exciting cause by inducing thorough catharsis and withdrawing nourishment, that the symptoms of disturbance continue, unless all nourishment be withdrawn for a sufficient length of time to give needed rest to the digestive organs.

The termination of this period is announced when the patient begins to experience sensations of natural hunger.

Improvement then usually appears and all symptoms of the attack pass away within several days or a week.

A large clinical experience with this class of cases convinces me that the treatment above outlined is the only effective and rational one.

The Milk Diet Treatment for Epilepsy was adopted in the Buffalo State Hospital 5 years ago, and has been continued since with Eminently Successful Results.

The Majority of Epileptics Submitting to the Treatment Improve in a Marked Way: Both Mentally and Physically; and the Seizures Diminish in Frequency and Severity.

In many, though not in all, instances, patients who, previous to commitment, suffered from several seizures per week have, after the **Milk Diet Treatment, enjoyed immunity from attacks for periods varying from 1 to 8 months, and in isolated cases the attacks have apparently disappeared altogether.**

As above stated, the patient becomes, after submitting to this treatment, brighter, more active and very appreciative; for invariably he realizes that relief has come to him. Indeed it is frequently observed by our nurses that Epileptics who have once experienced relief from an enforced limited and special diet voluntarily, during an impending maniacal attack, submit to fasting.

The Diet should be Milk exclusively, and should be continued for several weeks.

It is well to follow the rule, that the amount of nourishment allowed must be governed by the condition of the digestive organs and not by the physical condition of the patient; and, in the event that symptoms of Toxaemia appear, to correct this, or rather allow the condition to correct itself.

It is worthy of remark that, notwithstanding the limited diet upon which these patients are maintained, they occasionally gain :flesh, in some instances going above the average weight, but more frequently the physical improvement is retarded until they are permitted to return to a regular diet.

The increase in weight occasionally observed in these isolated cases, notwithstanding they are maintained upon a limited diet, would seem to contradict ordinary experience and the laws of physiology, but the explanation is simple.

These patients, when treatment is commenced, are found to be in very poor physical condition; they have suffered long from the combined effects of the absorption of Toxines and the non-assimilation of the meagre amount of nourishment their deranged digestive organs were able to receive.

The system, upon being relieved of their influence of Toxines, inaugurated by a change of Diet, is able to perform assimilative processes; and the stomach and intestines, now no longer embarrassed by the presence of fermented and accumulating material, are able to work normally, and give forth normal products of digestion.

More frequently the effects of a limited diet give the results one would naturally expect, viz., loss in flesh, strength and activity and well marked anaemia; a condition, however, that need give little anxiety, as it is easily under control, the patient immediately responding to an increase in diet, when circumstances or safety appear to demand it.The importance of maintaining normal digestion during the Treatment of Epilepsy can not be overestimated, for in reality upon this depend the chances of benefiting the patient.

Constipation Should Be Immediately relieved by the exhibition of Cathartics, Laxatives or Enemata.

The habit of overfeeding the sick is an error too often committed, and I do not exaggerate when stating that the serious consequences following this practice are many times truly appalling. There is no denying that the anxious relatives, with perfectly good intentions of course, are often responsible for the serious consequences following this display of misdirected kindness. Even the attending physician is influenced by the belief that the body in disease is distressed for want of nourishment, and, to supply the supposed enormous waste produced by fever or disease, orders nourishment even when the patient expresses no desire for it, and not infrequently the victim is urged and forced to take nourishment when instinctively repelling the idea.

I have seen develop in Epilepsy, in Acute Mania, and Melancholia, rapid and Fatal Toxaemia, resulting from the injudicious administration of nourishment, when, in my opinion, recovery would have resulted under treatment based upon a properly regulated diet. I think it pertinent to remark here that the condition "Acute Toxaemia", referred to in the foregoing, is a frequent and often fatal complication of Acute Mental disease, and heretofore has appeared to us clothed in the indefinite term, "exhaustion."

I am not insensible of the importance of supplying nourishment to the sick, but I maintain that in attempting to force it, in cases prone to disturbance of the digestive function, especially intestinal, we defeat the very object sought; for the food that is forced in these cases but serves to add fuel to the fire, by supplying the alimentary canal with material that must undergo fermentation and putrefaction. In other words, the attempt to supply nourishment to the body when threatened with the absorption of poisons from the intestinal canal, is based upon a wrong conception of the operation of the digestive and nutritive processes.

The question of nutrition is not only subordinate to that of protecting the body against the invasion of fatal poison attacking from within, but it is doubtful if, in the condition alluded to, assimilation is possible.

I venture the assertion that Forced Feeding in Typhoid Fever is more Often Harmful, than beneficial.

In a few cases subjected to a Limited Diet, or allowed no nourishment, I have been gratified to observe, after all other procedures had failed, a prompt amelioration of the alarming symptoms and a fall in the temperature that previously had resisted all measures.

This observation is so completely in harmony with the views already expressed, that I can not refrain from presenting it, notwithstanding the treatment advised seems like, and **in fact is, reverting to the time-honoured though obsolete practice of "starving a fever."**

Undoubtedly some **advantage is to be derived from the use of the so-called Intestinal Antiseptics in those cases of Epilepsy exhibiting a tendency to periodic attacks of disturbance, or in fact in all cases presenting any of the psychical forms of the disease; for, as I have shown, these complications of Epilepsy Depend Upon the Absorption of Poisons from the Intestinal Canal.**

However, even under the most favourable circumstances, Intestinal Antiseptics can exert but feeble Antiseptic powers, when employed for the purpose of controlling fermentative changes in the intestinal contents.

Little can be accomplished, unless other measures are employed in conjunction with them, for we are able to use only small quantities of Intestinal Antiseptics.

It is certainly reasonable to assume that Antiseptics, when used in small quantities, produce but a partial effect when brought into contact with a quantity of confined material that is undergoing the changes of decomposition, for such is the condition encountered in the intestinal canal of subjects suffering from symptoms of Toxaemia.

The indications, therefore, for the relief of this, are:

1. To diminish the quantity of material in the intestinal canal;
2. To maintain the amount at the minimum;
3. To control the tendency to fermentative changes by the exhibition of Intestinal Antiseptics;
4. **The amount of material in the intestinal canal may be kept at a minimum by maintaining the patient on a Limited Diet, and by the administration of Cathartics and Enemata.**

Regular and Sufficient Exercise is of much assistance to Other Measures Employed in the Treatment of Epilepsy.

Much, however, depends upon the Environment of the Patient, his Inclinations, degree of intelligence and ability to **Carry Out Certain Instructions.**

In suitable cases where it is possible to do so, and when the recommendation would seem to promise favourable results, Regular and Sufficient Exercise should be Advised.

Chronic Idiopathic Epilepsy; we can ameliorate the symptoms by the enforcement of appropriate Moral and Hygienic Measures.

The ancients seem to have thoroughly understood the Important Influence Exerted Upon Epilepsy by Diet and Exercise.

The following, from Plutarch, referring to the well known case of Caesar bears in clear and concise language upon the point discussed, and the excellent description of the great Roman's personality also lends interest to the passage:

> ***"But they were astonished at his patience under toil, so far in all appearances above his bodily powers; for he was of slender make, fair, of delicate constitution and subject to violent headaches and epileptic fits. He had the first attack of the falling sickness at Corduba He did not, however, make these disorders a pretense for his infirmities, endeavouring to strengthen his constitution by long marches, by simple diet and by seldom coming under covert. Thus he contended with his distemper and fortified himself against these attacks."***

(Caesar went into South Spain as Quaestor in the year 68 B. C. He was therefore about 32 years old when seised with the attack at Corduba).

The following conclusions may be drawn:

1. Intestinal Toxaemia developing in the Epileptic results in exciting the various psychical manifestations of Epilepsy.

2. Simple Epilepsy possibly has its origin in the accumulation in the system of some proximate principle, which, under extraordinary circumstances, exhibits toxic properties, and thus periodically excites convulsions.

3. The effect of the Milk Diet Treatment upon Epilepsy, if sufficiently long continued, results frequently, in diminishing the number and severity of the convulsions, and tends eventually to improve the physical condition of the patient.

4. The harmful effects resulting from the long continued use of the Bromides in epilepsy more than counterbalance the apparent benefits.

5. The Epileptic tendency probably depends largely upon a susceptible though otherwise healthy nervous system, which is unable to offer normal resistance to irritation." - Dr Percy Bryant, MD, Medical Superintendent, Manhattan State Hospital, in The State Hospitals Bulletin, October 1896.

"Professor Dr Bouchard, MD, has succeeded in showing that normal Urine contains at least 7 Toxic Substances; a Diuretic, a Narcotic, one that Produces Salivation, one that Contracts the Pupil, one that Lowers the Temperature, and 2 which Produce Convulsions, one of these last is Organic, and the other is a Mineral (potassium). All these Toxic Substances are eliminated from normal Blood Stream by kidneys.

The Plasma of the Blood is only slightly toxic, but its cells contain poison, like all the cells of the body, and these toxic constituents of each cell, can be set at liberty by dis-assimilation, or by the destruction of the cell itself.

These Poisons, which are contained in abundance in the cells of all the tissues, are of 2 kinds:

1. **Organic Substances, resulting from Dis-assimilation and Secretion.**

2. **Mineral Substances, at the head of which we must place Potassium.**

The alimentary canal is an important source of poisons resulting from putrefaction. Alkaloids exist in faecal matter of several kinds, and when one kind of alkaloid predominates in the intestines, it predominates also in the urine. Bouchard has established the toxicity of faecal matter by chemical analysis, and has shown that it is due to Potash, Ammonia, and to Other Substances. Bouchard has also proven by experiment that Intestinal Antiseptic Treatment, which causes the Alkaloids to disappear from Faecal Matter, and Urine, Diminishes the Toxicity of Both.

> ***"The healthy man is both a receptacle and a laboratory of poisons. In fact he receives them in his food, he creates them by dis-assimilation and he forms them in his secretions. The human body is the theatre of the toxic elaborations carried on by the normal microbes, which constantly inhabit the alimentary canal, and yet man is not poisoned. His liver protects him by arresting on their way, before they pass into the general circulation, the poisons brought from the intestines by the portal vein, in order to neutralise them or throw them back into the intestines. Then the Excretory System expels the poisons which are in circulation. I have demonstrated it experimentally, taking the natural product of an excretion and studying its toxicity by injecting it into the veins of an animal."*** *- Professor Dr Charles Bouchard, MD, in "Lectures on Auto-intoxication in Disease", 1894.*

Of the Fatty Acids, Butyric and Acetic are looked on as Poisonous; of the nitrogenous derivations of proteids considered poisonous we have: Leucin, Tyrosin, Creatin and Creatinin, and the 2 latter produce the convulsions of so-called Uremic Poisoning. The Aromatic Poisons known are: Phenol, Indol, Cresol, Skatol and Ammonium Valerianate.

Of the Gases Sulphuretted Hydrogen is probably the most Poisonous.

All These Enter the Human Body Through Foods, which means to say by the intestinal canal, and we must look to this canal, and especially to the lower part of it, as the gateway for those poisons which can produce so-called Uremia.

From Now On The Attention of All Interested in the Further Growth and Development of medicine, Will Be Devoted Mainly To The Study of the Lower Intestinal Contents, Their Chemical Changes, Their Toxic or Benign Qualities, How They Enter Blood Stream And What Effects They Cause to Nerves, Tissues And Organs.

We Must Devote All Our Attention to the Immediate Precursors of Urea, and Seek In Them or Their Products, or Forerunners the Toxins so Dangerous to Human Life.

1. Toxin Causes Irregularities by disturbing the Thermotaxis Centre (Cortex Cerebri), or Thermogenesis Centre (Nucleus Caudatus).

2. Toxin Causes Irregularities in the number of Respirations, causes Dilatation of Stomach, and Laryngeal Disturbances by Poisoning the Pneumogastric Nerve, and its Recurrent Branch of the Median Nerve.

3. Toxin Produces Irregularities in Pulse; by disturbing Cardiac Nerve Centre." - in "New Orleans Medical and Surgical Journal", September 1898.

Chapter 17

The Function of The Kidneys As Emunctories

Renal and Urinary Diseases

"Disorders of the great cleansing or Emunctory System are always fraught with danger to health and life.

It is sometimes forgotten that more solid matter in the form of urea, etc., is removed by the kidneys each day than by any other one system.

Sudden exposure to severe alternation of temperature, the excessive use of alcohol, and other disturb and irritate the minute circulatory system of the kidneys, and we have as a result various forms of inflammation and consolidation, interfering with normal action.

As the retention or too-slow elimination of urea from the blood is the retention of a poison, it is no wonder that many of the cases of heart disease and brain disease hare their start in the imperfect action of the renal system.

Adult Digestive and Intestinal Diseases

Especially realize that an over-indulgence, either in foods or stimulants, and in some cases too restricted diets, are alike unfavourable to longevity.

With the various peptones and dietetic preparations, and with a more accurate knowledge of the functions exercised by various organs, and parts of the intestinal tract, we are better able to suit treatment to the control of this class of diseases." - in "Twelfth Annual Report of the Board of Health of the State of New Jersey", 1888.

Renal Stasis

"Venous Hyperæmia of the Kidneys: Etiology; Renal Stasis occurs whenever the renal veins are in any way obstructed.

This Usually Follows Diseases of the Organs of Circulation and Respiration; in other words, whenever the exit of blood from the right side of the heart is impeded.

In certain cases the impediment may be caused as a local obstruction by thrombosis in the renal veins, or in the course of the inferior vena cava.

As a consequence of Blood Stasis, the arterial supply of the kidneys must necessarily be reduced; consequently the amount of urine that is secreted is also diminished.

Since the Renal Disease is Dependent upon Blood Stasis which has its Origin Elsewhere, the symptoms of Obstructed Circulation in Other Organs will be observed.

Dyspnoea, Cyanosis, Palpitation, and Oedema are frequently developed." - Dr Henry Munson Lyman, MD, Professor Rush Medical College, Chicago, in "A Text-book of the Principles and Practice of Medicine", 1892.

Renal Stasis; leads to Renal Disease, and Arteriosclerosis

"The study of Arterio-Sclerosis in the adult led me to the conclusion that identical pathogenic factors might be responsible for different forms of Arterial Disease, according to variations in the resilience of the tissues affected; that the difference between diffuse hyperplastic sclerosis and senile arterio-sclerosis, for instance, might be a question of varying physiological age response rather than a difference in the pathogenic agents involved.

In other words, the younger the patient the more active was the type of tissue response to insult likely to be, and I expected to find the more active phases of arterio-sclerosis in children.

Identity of the Vascular Lesion found in these Children With Diffuse Hyperplastic Sclerosis in Adults

1. In the first place the actual lesion as it affects the terminal arterioles and their parent vessels (best seen in the kidneys) is the same as diffuse hyperplastic sclerosis in adults. There is swelling and fatty degeneration of the intima of the arterioles, leading to a greater or less degree of obliteration of the arteriole lumen; frequently the lumen appears to be completely obliterated. At the same time there is proliferation of the intima without fatty degeneration in the parent vessels of the arterioles.

2. The vascular lesion affects the intimate vasculature of the organs rather than the larger arteries. This distribution of the lesion within the vascular tree is well illustrated by the present 4 cases, in 3 of which the larger arteries are inappreciably diseased, while in the 4th it is only the aorta and vessels at the base of the brain that showed much sclerosis.

3. The incidence of the lesion in the various organs follows that found in adults in its main features; that is to say, the kidney and spleen are most affected, the pancreas and suprarenals are next in order, the affection of the intimate vasculature of the liver is slight and the heart escapes. It is noted that the vessels in the brain were not affected in these cases, whereas those in the stomach and intestines were. In these two respects the incidence of the lesion is different to that in adults. The finding of the lesion in the stomach and intestines is interesting because in my experience the lesion is infrequent in this situation in adults; its absence in the brain is only referred to for the sake of fairness, since in only 2 of the 4 cases was the brain examined, in one of these the material was poor.

4. The vascular lesion was associated with left ventricular hypertrophy and a raised blood-pressure. These several points establish the identity of diffuse hyperplastic sclerosis in children and adults.

Renal Disease

Through some Toxaemia Caused By Insufficient Elimination, Causes Indirectly a General Arterial Disease; as might seem to have been the case in a boy of 6 months, in whom a most extensive **Arterio-Sclerosis was found in association with bilateral Hydronephrosis (obstruction to urine flow), and extreme Cirrhosis of the Kidneys due to Phimosis (tight foreskin is difficult to pull back over the glans (penis), common in infants and children). The raison d'être of the Gastro-Duodenal Symptoms, may be and doubtless often is Reflex; or it may be Mechanical, from the Adhesions, Pericholecystic, Pericæcal, etc., set up around an inflamed gall-bladder or appendix; the mechanical cause again may operate not directly, but mediately through the Intestinal Stasis, and consequent Toxaemia set up that is: A Toxic Cause which of course may also operate apart from mechanical hindrances." -** Dr Geoffrey Evans, MD, in "Arterio-Sclerosis in Children", Quarterly Journal of Medicine, October 1922.

> ***"Evans considers that the simplest conception is to regard the vascular and renal lesions as simultaneous results of the action of a single pathogenic agent. As to what this pathogenic agent is or may be, the small series of cases furnishes no compelling evidence. Cases of this kind are not generally regarded as ever being syphilitic, and in this series there was no clinical or Wassermann evidence of "specific "infection."*** *- in "The British Homoeopathic Journal", April 1923.*

Concerning The Effects of Toxaemia, Emotions And Temperature Upon The Health And Function of Kidneys

"To me, the following considerations seem to favour: "that rheumatism is due to a reflex derangement of the nerves of the kidney, whereby **its secretory or vasomotor functions are altered**, thus producing a vitiated condition of the blood, the result of which is rheumatic inflammation."

That the function of the kidneys is dependent on, and can be altered by nervous action is shown in many cases of mental excitement, emotion, or disease. Albumen is often noticed in the urine of students about to undergo examination; also after hysterical fits, and during mental disease.

Non-secretion of urea, or temporary suppression of urine has been known to occur in some cases of nervous disorder.

Further, in certain cases of acute rheumatism, complicated with severe cerebral disturbance, a sudden, profuse flow of limpid urine may occur, accompanied by amelioration of the symptoms. The fact of this happening in the course of a disease during which the urine is scanty and loaded with urates, shows that some nervous, and not organic, cause is at work producing perversion of renal function, but which can be temporarily quelled by some other nervous commotion, such as occurs during the delirium of cerebral rheumatism.

In all cases of acute rheumatism there is swelling of the renal epithelium; in many cases albumen is present in the urine.

Bartel says he has repeatedly noticed an attack of haemorrhagic nephritis coincident with acute rheumatism; and, in a few cases, the urine has been known to coagulate even while in the bladder.

That the kidneys are in abeyance to a great extent during acute rheumatism is shown by the profuse acid perspirations.

If the renal Emunctories were in proper working order, why should these occur?

If lactic acid or some other morbid product be in the blood, it is evident that the kidneys cannot get rid of it, and the skin has to take on the work.

As the function is restored, the urine becomes clearer and more abundant, the acid sweats diminishing in proportion.

Atmospheric changes are accompanied in most rheumatic individuals by amelioration or aggravation of joint affection.

This can only be explained by reflex action; the cutaneous nervous system, possibly morbidly sensitive on account of previous shocks, exposed as it 18 to atmospheric changes, reflects the nervous stimulus it sustains on a change from fine to raw and damp weather, to the joints, directly in the case of chronic, or through the kidneys in the case of sub-acute rheumatism." - Dr J. Matthew Caw, MD, in "An Enquiry Into the Nature of Rheumatism", The Edinburgh Clinical and Pathological Journal, 13 September 1884.

The Functions of the Kidneys

"The kidneys are undoubtedly Emunctories by which injurious substances accidentally present in the circulation, effete matters resulting from the perpetual renewal of the organization, and any excess in the wholesome principles of the blood, are thrown off from the system, and thus prevented from interfering with its healthy actions.

In performing this office, they appear to permit the passage of certain substances with little or no change, as water, urea, and various salts, while they occasionally decompose others, and eliminate the results of this decomposition in new forms of matter, probably not pre-existent in the body.

From this view of the functions of the kidneys, it is obvious that the urine may vary greatly, both in quantity and constitution, not only in different individuals, but even in the same individual under different circumstances, and yet still remain within the limits of health.

Thus it is more or less copious according to the quantity of liquid drank, and the state of other Emunctories, especially of the skin.

One of the most important offices of the kidneys is to preserve the amount of fluid in the blood in due proportion to the wants of the system.

The quantity of urine will, therefore, be increased when there is an excess in this proportion, and diminished when there is a deficiency.

Consequently, other things being equal, the individual who drinks more largely than another will pass a greater amount of urine in the same time, and the same difference will be observed in the same individual at different times, according to his habits in this respect.

Again, the urinary and perspiratory functions are so related, that when one is unusually active, the other is in general proportionably inert, and whatever promotes or impedes the one has an opposite effect upon the other.

A full rich diet of animal food, supplying more nutriment to the blood than the wants of the economy require, is attended with an excess of the solid ingredients of the urine; while a purely vegetable diet, which leaves the blood somewhat deficient, necessitates a diminished elimination of nutritive matter, and produces, consequently, an opposite state of the secretion.

The urine immediately following a meal in which liquids have been taken freely has long been noticed to be very different from that which occurs after digestion has been accomplished, and the rich chyle is poured into the circulation.

The former, sometimes called urina potus, is abundant and watery; the latter, denominated urina sanguinis, is moderate in quantity, but loaded with solid matters. Whatever promotes activity in the general organic processes of the system, as vigorous exercise, for example, and whatever renders it necessary that the system should live upon itself, as starvation and febrile diseases, promote a loaded condition of the urine, because the effete matters are in proportion to the activity of the organic changes.

Even the morning urine, which upon the whole may be considered as offering the truest criterion of the normal state of the function, because least interfered with by disturbing causes, is more or less diversified in character.” - Dr Rezin Thompson, MD, in “The Medical Adviser”, 1870.

All Varieties of Hypertension Are of Renal Origin

“Nevertheless some experimental evidence has recently been forthcoming which has suggested to some observers that all varieties of hypertension are of renal origin.

This view is based on the experiments of Goldblatt and his co-workers, published in the Journal of Experimental Medicine in 1934.

They found that they could produce permanent hypertension in dogs by partial constriction of both renal arteries by screw clips, and also by partial constriction of one renal artery followed by removal of the opposite kidney.

The presence of the normal kidney tends to prevent hypertension developing.

The condition was studied in rats in subsequent experiments by Wilson and Byrom.

They showed that constriction of one renal artery resulted in permanent hypertension and that subsequent changes occurred in the opposite unclamped kidney essentially similar to those seen in malignant hypertension in man.

These observations led clinicians to be on the alert for cases of so-called essential hypertension in patients who were suffering from unilateral kidney disease, in the hope of curing the high blood pressure by removing the diseased kidney.

As a matter of fact, it had been known for some time that there might be an association between malignant hypertension and unilateral renal disease, and cases of this nature were described in the literature.

But A. M. Butler was the first to record a successful case of removal of the diseased kidney, followed by the restoration of a normal blood pressure after hypertension (Journal of Clin. Investigation, 1937).

It is, however, reasonable to suppose that some vasopressor substance is liberated during destruction of kidney substance, with the consequent development of hypertension.” - in “New Views on High Blood Pressure”, The Medical Echo, July 1945.

The Role of the Alloxuric Bases in the Production of the Cardiovascular Changes of Nephritis

"Hypertrophy of one or both ventricles, with or without dilatation, and increased arterial pressure are found in many cases of nephritis and in various lesions of the kidneys associated with destruction of parenchyma.

Of the theories promulgated in explanation of this phenomenon only merit serious consideration, the intoxication or retention theory originated by Bright.

(Traube. Ueber den Zusammanhang von Herz und Nieren Krankheiten. Berlin, Hirsch wald, 1856, and Traube. Nachtrltgliche Bemerkungen uber den Zusammenhang von Herz und Nieren Krankhelten. Deutsche Klinik, 1859, Nos. 31 and 32).

Bright's retention theory postulates that in nephritis certain excrementitious substances are poured into the circulation that by exercising either a direct cardio-excitory action cause hypertrophy of the heart, or by producing constriction of terminal arterioles and capillaries throw additional work on the heart muscle and thus cause enlargement. For those inflammatory forms of nephritis in which the heart changes are manifestly secondary to the kidney lesions, where we have the sequence—diminished excretion of urine, increase in arterial pressure, hypertrophy of the heart—no other explanation than the one given by Bright seems possible.

Of the substances that are normally excreted by the kidneys and that in disease of these organs are retained, urea is the only one that has been physiologically tested for its effects upon arterial pressure, the arterial coats, and the heart.

Ustimovitsch, (Arbeiten der physiol. Anstalt zu Leipzig, 1871, p.198. Sachsische Gesellschaft der Wissenschaften, 1870, p.430) Grutzner, (Pfluger's Archiv der Physiologie. 1875, xi. p.350) von Cavazzani and Robustello (Cavazzani und Robustello. Archivo per le Scienze med., xv. p.329, and xvi. p.425) **injected urea into the blood and observed arterial spasm and a rise of blood pressure.**

O. Israel (Virchow's Archiv, 1881, lxxxvi. p.299) **fed rabbits with increasing doses of urea and produced both "hypertrophy of the heart, and of the kidneys."** While investigating the role of uric acid and its congeners, the alloxuric bases, in the causation of so-called uric acid lesions ("Uric Acid Theories," etc., (Journal of American Medical Association, July 1899), "An Investigation into the Causes of So-called Uric Acid Lesions," etc. (New York Medical Journal, August 1900), a series of physiological tests were carried on with the latter group of excrementitious substances.

It was found that they are capable of producing:

1. Marked anatomic changes in the kidney parenchyma, consisting in granular and fatty degeneration of the epithelial cells lining the tubuli contorti;

2. A proliferation of the endothelial cells lining the intertubular capillaries.

Gaucher, (Revue de Med., 1888. Pathogenie de Néphrite, These, Paris, 1886) in his investigations on toxic nephritis, had chronicled similar findings ("néphrite épitheliale").

Kolisch and Tandler (Monograph, Stuttgart, 1895) repeated his experiments and corroborated them ("Granular Atrophy").

The production of an endarteritis in the renal arterioles by the alloxuric bases led us to investigate the effect of these substances on the systemic blood vessels, the heart and the arterial pressure, with a view of determining what, if any, role these excrementitious bodies played in the causation of the cardio-vascular changes so frequently observed in nephritis.

The alloxuric bases are, in contradistinction to uric acid and urea, very readily soluble in the tissue fluids, and possess highly toxic properties.

They are found in normal urine in appreciable quantities —up to 0.06 gr. in 24 hours—and their formation and excretion or retention are greatly increased in a variety of morbid conditions.

Their chief representatives are xanthin, hypoxanthin, adenin, and guanin.

From experiments we draw the following conclusions: Xanthin and hypoxanthin are capable of producing a rise in arterial pressure which may be due to arterial spasm, increased heart action, or both.

In view of the presence of endarteritic changes in the arteries and the absence of corresponding changes in the endocardium, we are inclined to the hypothesis that **the primary effect of the alloxuric bases is exercised on the arteries, causing spasm. As a result increased work is thrown upon the heart, causing primarily hypertrophy of the left ventricle.**

As long as nutrition remains good—i.e, as long as the intoxication is not so violent or so long lasting as to produce degenerative changes of the heart muscle—no dilatation supervenes.

Per contra, owing to the increased determination of blood to the coronary arteries (as a sequence of the hypertrophy of the left ventricle), the nutrition of the whole heart is ameliorated and the right ventricle hypertrophies.

This hypertrophy of the right ventricle might be explained in a different manner — i. e., as a result of spasm of arterioles of the pulmonary circulation.

We know, however, that the pulmonary vessels do not respond to stimuli as vigorously as the systemic arterioles (Senator. Die Erkrankungen der Nieren, Wien, Alfred Holder, 1895, p.98), so that the latter explanation is not sufficiently grounded in fact.

As soon as the nutrition of the heart grows defective, dilatation of one or the other or of both ventricles occurs. Xanthin and Hypoxanthin, therefore, representative members of the group of alloxuric bases, are capable of producing the cardiovascular changes in those forms of nephritis in which retention of excrementitious substances precedes the lesions of the heart and arteries. In the production of the hypertrophy of the heart so frequently seen in the primary interstitial form of nephritis, where the retention theory does not hold good, they also play an important role in a slightly different sense.

The 3 chief causes for this primary form of indurative sclerosis of the kidneys are:

1. The so-called uric acid diathesis (gout);
2. Lead,
3. Arteriosclerosis.

The role of syphilis, alcohol, and of diabetes mellitus is not universally recognized.

1. The Gouty Form of Interstitial Nephritis

In our previous publications on the role of the alloxuric bases in the production of so-called uric acid lesions we have demonstrated, we believe conclusively, that the alloxuric bases are the primary factor in the causation of "gouty" kidney and of the majority of the symptoms of the gouty diathesis. In the gouty form of primary interstitial nephritis, therefore, the same poison that produces the kidney lesion causes the cardio-vascular changes.

2. The "Lead" Form of Interstitial Nephritis

Lead Intoxication can produce both the typical nephritis and in very chronic cases other symptoms of gout, so-called spurious or lead gout.

We must conclude, therefore, that the toxic action of lead is either identical to that of the alloxuric bases or that lead is capable of causing metabolic changes in the organism which lead to the formation of alloxuric bases.

These in their turn, as above, cause cardio-vascular, nephritic and gouty symptoms. Certain changes in the blood, "lead chlorosis," characterized by evidences of deficient oxygenation and of excessive nuclein katabolism, important factors in the generation of the alloxuric bases, lead us to favour the latter supposition.

3. The Arterio-Sclerotic Form of Interstitial Nephritis

The inter-relationship between arterio-sclerosis and induration of the kidneys may be threefold, viz.:

a) Arterio-sclerosis may be primary, the induration and atrophy of the kidneys secondary; " true sclerosis of the kidneys."

b) As a result of parenchymatous nephritis with retention of excrementitious substances, both hypertrophy of the heart and arteriosclerotic changes in the arteries may occur. In this case the nephritis is primary, the "arterio-sclerosis" secondary.

c) The same Toxins may simultaneously produce both the Nephritis and the Arterio-sclerosis (lead, gout, etc.).

Our investigations, therefore, justify us in attributing to the alloxuric bases an important role in the production of the cardio-vascular changes observed in all forms of nephritis." - Dr Alfred Careno Croftan, AM, MD, Formerly Assistant Professor of General Diagnosis and Clinical Instructor of Chest Diseases at the College of Physicians and Surgeons, Chicago, Ill., in "The American Journal of the Medical Sciences", 1900.

Every Emunctologist should known that:

If there is the inability of the Liver to function, the Kidneys will suffer from over-taxation, these then produce in the system poisons from Uric Acid, and also from the liver forces. If the Uric Acid, being allowed to carry back into the system, it will shows itself in the form of pains in the side, through the lower limbs and arms, or Neuralgia pains, or Rheumatic pains.

Uric Acid Acts as a Factor in the Causation of Disease

"I am here merely giving an outline of the part played by Uric Acid in the Causation of Disease. With regard to infection, the point may be expressed shortly thus; in normal conditions, and still more in conditions of stimulated nutrition, when the blood is free from uric acid and the circulation is, in consequence, free and perfect in all the tissues, when digestion is perfect and metabolism complete; when, in a word, the fires of life burn strong and bright, the microbes of disease are burnt up and destroyed, and have no chance of taking root anywhere. On the other hand, when under the reverse conditions, the draught is bad, combustion is incomplete and the fires run low, the microbes get a firm hold, and are able to multiply and produce the disease.

From this point of view the causation of fever is of extreme interest, for fever is accompanied by a general increase of combustion.

As my investigations tend to show that the functional and organic disorders of which I speak are in many cases entirely due to an excess of uric acid in the body and blood, this is practically a work on the causation of disease by uric acid, of the process by which it comes to be present in excess in the body, and of the means of preventing such excess.

A simple matter to investigate the causation and treatment of the headache from which I suffered; but gradually through these years the horizon has expanded, and I now see that if even a half of my deductions are eventually substantiated, a very large portion of the field of medicine will be modified thereby.

Having been all my life a sufferer from migraine it was in the autumn of 1882 that in despair of obtaining any complete relief from drugs, and not without some fear that I was really suffering from organic disease, I gave up all meat and replaced it by milk, fish.

But once having noticed the relation of this headache to the excretion of uric acid, I soon noticed that each of its concomitant symptoms bore exactly the same relation to uric acid, that when the pulse was slow and of high tension there was always a greater excretion of uric acid than when it presented the opposite character, and the same with the mental depression and scanty urine.

After this a little further experimentation brought out the fact that the excretion of uric acid was completely within my control, and that I could alter it from day to day, or hour to hour in either direction at pleasure (Journal of Physiology, Vol. 8.).

I now soon found out that in altering the uric acid I could alter the symptoms related to it; that when I produced an increased excretion with alkali, I produced the headache, mental depression, cold surface, slow pulse and scanty urine, and that when I stopped the plus excretion with an acid I removed all these symptoms; so that not only had I acquired the power to produce or remove the headache, but I had also the power to relax or contract the arterioles and capillaries, to affect the tension of the pulse, the rate of the heart's action, and thus to influence the circulation in the brain, skin, kidneys, and probably the whole body. I would strongly recommend all those who are interested in the causation of disease by uric acid to read the interesting article just referred to, as it gives a most able summary of the evil effects of excess of this substance in the blood, as well as of the opposite effects of its more or less complete absence.

Uric Acid Acts as a Factor in the Causation of Disease in 1 of 2 ways:

1. As a direct local irritant when it is present in any tissues in considerable quantity and probably still in solution or suspension as a colloid quadriurate.

2. As an obstructor of capillaries affecting on the one hand the circulation, nutrition, function and temperature of all the organs and tissues of the body, and on the other, producing high blood-pressure which directly affects the heart and the vessel walls, and otherwise influences the intra-cranial, thoracic and chylopoietic circulations.

We shall see that by this action on the circulation, it controls the physiology of every-day life, and determines the slow or quick combustion of the human body, just as shutting or opening the flues determines that of the kitchen fire.

We shall see that while the old theory that excess of uric acid in the urine was the result of deficient combustion explains nothing, our newly-acquired knowledge that excess of uric acid in the blood, of which the excess in the urine is the index, is the cause of the deficient combustion, explains everything.

We shall see that as a result of this knowledge, our power over physiology is doubled, and that over pathology trebled and quadrupled, and that in large fields of the treatment of disease, where empiricism reigned before, something approaching mathematical accuracy can now be substituted for it.

In a large number of disease processes it is absolutely true that when we have controlled the uric acid we have controlled the disease.

I may mention those on the action of uric acid on the blood, on the diurnal variations of the blood decimal, on the treatment of chlorosis; on the causation of high blood pressure by uric acid; the demonstration of Uric Acid and Xanthin (a crystalline compound found in blood and urine which is an intermediate in the metabolic breakdown of nucleic acids to uric acid) in the blood; the effects of wines, acids and alcohol on the acidity of the urine; the accidental causation of endocarditis by drugs; the urinary excretion over 4 years on various diets, and some recent experiments on diet with deductions as to the diet treatment." - Dr Alexander Haig, MD, in "Uric Acid as a Factor in the Causation of Disease", 1897.

Relationship Between Certain Products of Metabolism and Arterial Hypertension

"Shaw discusses the theory that **a pressor body of protein origin is liberated into the circulation and produces high blood pressure. Beginning with the assumption that some protein body, a product of metabolism, had a pressor effect, we investigated the properties of some of the better known metabolites.**

A series of experiments showed that urea, uric acid, creatin and creatinin had no constant effect on the blood pressure, but another group of experiments showed that the guanidine bases have a very powerful pressor effect.

Kutscher and Lohmann were the first to describe methylguanidin in the urine of normal persons. Achelis found it in the urine of the dog, horse and man, and Engeland demonstrated **dimethylguanidin in the urine.**

Most of the interest attracted to these substances lies in their possible relationship to tetany, parathyroprivia and to idiopathic tetany, as indicated by the work of Koch, Noel Paton and Findlay, Findlay and Sharpe, and Nattrass and Sharpe.

In our experiments we have used methylguanidin sulphate, methylguanidin nitrate, dimethylguanidin sulphate, guanidin carbonate, guanidin thiocyanate and guanidin hydrochlorid.

All these compounds show a very striking ability to raise the blood pressure and to maintain it at a high level.

Guanidin compounds also produce a marked decrease in the respiratory rate and a slowing of the pulse, with an increase in the amplitude of the heart beat.

Toxic doses of these compounds will produce twitchings. Very similar to those seen in tetany, and larger doses may cause severe convulsions.

Section of the vagi after injection of the guanidin compounds produces no effect on the elevated blood pressure.

In the decerebrated dog, the injection of methylguanidin will produce a prompt rise in blood pressure, thus indicating that such a rise is due, in part at least, to peripheral vasomotor action.

It has been found that a 10%, solution of calcium chlorid, potassium chlorid and ammonium chlorid in doses of 0.1 gin. per kilogram, when slowly administered intravenously, produces a prompt and persistent fall of high blood pressure to a normal level.

Normal hydrochloric acid in doses of 1 c.c. Per kilogram, injected intravenously, produced the same result.

While normal persons and patients with a normal temperature and a normal blood pressure have shown an average daily excretion of 100 mg., the **patients with a high blood pressure show a marked diminution in the excretion of guanidin bases.**

Several febrile patients have shown a marked increase in the output of guanidin bases, and one very interesting patient with a severe chronic nephritis and evidence of marked protein destruction showed a high output of guanidin bases, but had a normal blood pressure.

In Chronic Nephritis, the damaged kidney is unable to excrete properly urea, uric acid, creatin and creatinin and that undetermined group of substances resulting from protein metabolism, classed under nonprotein nitrogen, a group that includes the guanidin compounds.

While urea, uric acid, creatin and creatinin produce no effect on the blood pressure, **it is interesting to see that guanidin compounds exert such a profound pressor effect.**

It seems quite possible that kidneys badly damaged by chronic nephritis, or only slightly damaged by arteriosclerosis or by a small vessel sclerosis, might be unable to excrete properly these substances having such a marked pressor effect.

Such a retention of guanidin bases, unless they were utilized or destroyed, might result in an elevation of blood pressure." - Dr Ralph H. Major, MD in "JAMA", 1924.

Auto-Intoxication Causing Renal Lesion

"Thus it is that there are multitudes of patients, sufferers from heart disease, whose lives are really endangered by little else than a renal lesion concomitant with generalized chronic arteritis.

The kidney almost always kills by uraemia.

This syndrome is to diseases of the kidney what asystolia is to diseases of the heart. It denotes functional insufficiency of the organ, and may be compared to the grave icterus which, clinically, stands for destructive alteration of the hepatic cells.

To understand the mechanism of this disorder, we must refer to the principal data which we possess respecting the intimate phenomena of nutrition.

Physiologists agree in defining nutrition by the terms, assimilation and disassimilation. The first consists in the fixation by the tissues, at the expense of the materials elaborated by the digestive tube, of the principles necessary for the repair, growth and function of all parts of the organism:

These principles are incorporated with the anatomical elements; are oxydised or broken up, hydrated or dehydrated the nature of the chemical and dynamical operations being as yet but imperfectly known.

But this series of transformations and exchanges leads, in every case, to the rejection of products that cannot be utilized; to the separation of veritable organic waste-elements.

It is to this second act of the nutritive movement that the name of disassimilation is reserved.

The destiny of these excrementitious materials, the greater part of which are noxious and toxic, is variable.

Some of them are almost immediately reduced by the oxygen of the blood, and the importance of a good pulmonary haematosis in the uraemic is evident enough.

Others, such as retrograde albuminoid substances, undergo in the liver, without doubt, secondary modifications which reduce them to the state of urea; but in the end all have to be eliminated.

For this purpose, the organism makes use of several Emunctories:

1. Skin
2. Digestive Tube
3. Lungs
4. Kidneys

If the disease effects the suppression of any or all of these depurative processes, the waste-products of nutrition, toxic or indifferent, accumulate in the humors and in the tissues.

It is to the sum of the accidents caused by this abnormal retention of excrementitious materials, that the name uraemia should be applied.

Usage has consecrated this old term.

But the term comprehends still more.

It will not merely suggest the notion of an accumulation of urea in the blood, or of an accumulation of the urinary excretion in general.

It includes the larger conception of an Auto-Intoxication by retention of products normally destined to be excreted, whatever may be the organ primarily affected.

There is, in fact, besides renal uraemia, a uraemia of cutaneous origin, and, it may be, of pulmonary or digestive origin, only the latter disorders have been but imperfectly studied as yet.

On the kidney devolves the principal role in the depuration of the organism.

The skin, the lungs, the intestines, if the renal filter becomes insufficient, it is on these other Emunctories that the depurative function devolves.

If they are sound, a vicarious action is established, and the accidents of renal uraemia are often staved off by the fact of a spontaneous curative process.

At any rate, the physician may apply himself to these Emunctories and promote excretion thereby, to the advantage of the damaged kidneys.

On the other hand, if these organs cannot lend themselves to derivation, if age or disease has damaged them so as to restrain their function, the danger of renal insufficiency increases with the insufficiency of other Emunctories.

We know the disorders which follow in animals the experimental application of an impermeable varnish over the whole extent of the external tegument.

Certain cutaneous affections realize similar conditions.

But in such cases the disturbances almost always pass unperceived, as the suppression of the cutaneous affection is incomplete, because it takes place progressively, and because the kidneys are healthy and easily do the additional work. Atheromatous old men, affected with renal sclerosis, have at the same time a dry thin skin with atrophied glands, and the subdermal vessels rigid and contracted.

Often the digestive mucous membrane and the lungs are at the same time degenerated.

Hence the uraemic accidents are repeated again and again, and these patients are less amenable to treatment than children **whose skin and intestines functionate well.**

These few preliminary remarks are necessary in order to explain different forms of this kind of poisoning.

The excrementitious substances not eliminated, act upon the nervous system as do certain vegetable or mineral poisons; whence a first class of uraemic accidents called cerebro-spinal uraemia. These same toxic principles, by a spontaneous effort of the organism, seek elimination by certain Emunctories capable of supplying the place of the diseased kidneys.

The conditions of secretion from these surfaces are consequently violently modified by the irritation of the toxic substances; and thus are explained the various bronchial, cutaneous, and other lesions of uraemia.

The principal derivative effect is produced upon the digestive tract.

The discharges which are poured out along this tract are almost always sufficient to determine functional disorders of extremely grave character.

The experiments of Claude Bernard and Barreswill, have shown that in nephrectomized dogs, the urea is eliminated by the stomach and intestine under the form of carbonate of ammonia, and that this elimination is accompanied with profuse vomiting.

Furthermore, there are many dropsical cases which do not present any like symptoms; and these disorders are seen in uraemic patients when there is no trace of oedema, and finally, their supervention often improves the nervous symptoms, which shows that we have here to do with a **natural curative process.**

The aggregate of these phenomena characterizes the second form of uraemia, the gastro-intestinal.

In this form of uraemia, **the more special seat of the disorder is the stomach and large intestine.**

But it is localized, sometimes in the small intestine, and even in the mouth and pharynx.

A few days ago, I stopped in the ward at the bedside of a young woman suffering from typhoid fever, whose spittoon was half-filled with a greenish liquid which she had expectorated.

Recognizing in this liquid the characters of uraemic vomiting, I immediately had the urine examined, and found in it an abundant precipitate of albumen.

The patient complained of a headache and of a dyspnoea of quite special aspect.

We had before us, in fact, a case of uraemic poisoning, due, without doubt, to an attack of epithelial nephritis, a quite frequent complication of typhoid fever.

The therapeutic indication presented itself clearly, and by dint of a few diuretic pills, aided by milk diet and purgative lavements, the patient got well without any drawback.

In chronic nephritis, where gastric uraemia is daily observed, the supervention of vomiting is preceded by want of appetite.

There is disgust for certain kinds of food, as in particular for meat; then comes on the vomiting.

Rarely preceded by nausea, the vomiting is easy, demands little effort, and is abundant, as in cerebral and meningeal affections.

The matters vomited are liquid, greyish, like dirty broth, not porraceous, as in peritonitis. These characters are always the same, and are almost pathognomonic of uraemia.

The vomiting is persistent, and is repeated several times during the same day, and for several successive days.

It generally ceases of its own accord, or under the influence of a simple laxative enema; and this is, without doubt, owing to the blood being cleared of the excrementitious matters which encumbered it; in fact, it is probable that the stomach often acts the part of a safety valve, which rises at a certain moment to allow an excess to be got rid of.

What is the nature of these vomitings?

In the first period, they represent simply an exaggeration of the natural secretion, brought about to make up the deficiency of the renal function. We thus witness a clinical realization of the famous experiment of Claude Bernard, and the vomited matters contain an excess of urea and carbonate of ammonia.

But later, under the influence of a prolonged irritation by the excrementitious substances, the gastric mucous membrane is profoundly modified.

It becomes the seat of lesions which in their turn condition the vomiting.

This is a distinction which is indispensable to therapeutics.

The vomitings at the onset should be respected as the index of a natural curative effort.

I cannot forbear thinking the nervous system sometimes intervenes to cause the vomitings, for they are frequently accompanied with hiccough, bulbar dyspnoea, and other cerebro-spinal phenomena. Moreover,

I have pointed out the analogies which connect these evacuations with cerebral and meningeal vomitings.

It is important to be settled as to these vomitings and their origin, if we would avoid serious clinical mistakes.

During the first year of my internat at Pitie Hospital, I often diagnosed as cancer of the stomach, or chronic enteritis, cases which the autopsy proved to be atrophic degeneration of the kidneys; so that afterward, whenever one of my colleagues came to me with a doubtful case which had failed to respond to all the pathognomonic conditions of gastric cancer, I insisted on an examination of the urine, and we generally found the kidneys profoundly altered, granular and atrophied.

It was so even with cases which had been diagnosed as chronic enteritis.

Since then I have often seen the same mistake made, though the phenomena of uraemic poisoning are better known today.

It happens often enough, even now, that inexperienced physicians treat patients for stomach complaints, whose kidneys are becoming sclerosed, and whose gastric symptoms are referable to uraemia.

Diarrhrea is the revealing symptom of intestinal uraemia.

This diarrhrea often comes on without being preceded by pain or colic, and though in some cases it may not be abundant, it exhausts the patient very little or not at all.

Moreover, **it favors sleep, and tends to the relief of existing headaches,** so that often it may be considered beneficial.

The rejected matters, ordinarily abundant, serous and fretid, greyish in colour, contain, in greater or less quantity, white or rice-like lumps, which look like the spawn of frogs.

These characteristics, like those of the vomited matters, are sufficient to lead the physician to a diagnosis of uraemia.

These evacuations contain an excess of urea and ammonium-carbonate, the latter resulting from transformation of urea in the intestine.

These are the only excrementitious principles, the search for which has been carefully made, down to this time; these investigations should be continued till **other toxic principles concerned in the pathology of uraemia shall be discovered.**

At a more advanced stage of the disease the diarrhrea changes its character, and from serous becomes dysenteric; modifications take place in the intestine identical with with those we have noticed in the stomach.

The mucous membrane becomes at length altered in its histological properties by dint of prolonged irritation, and typical lesions are produced **whose seat of election is the large intestine.**

By dint of the irritation which constitutes the hyper-secretion which, as we have seen, is depurative, are developed the symptoms of degeneration of the walls of the intestine.

To sum up, uraemic troubles may affect the different departments of the digestive tube together.

Bucco-pharyngeal uraemia is rare; gastro-intestinal uraemia is of great frequency.

If you stop these discharges prematurely, you run the risk of seeing convulsions or coma replace the suddenly suppressed diarrhrea.

There remains for consideration a last symptom which would find its place as well under the symptomology of cerebro-spinal uraemia as among the phenomena of digestive uraemia; I refer to hiccough.

This symptom has for its starting point the stomach or nerve centre.

It often appears in the train of uraemia, and this sometimes is accompanied with vomiting, sometimes with more or less intense attacks of dyspnoea.

It is remarkable for its violence and tenacity; sometimes lasts hours, sometimes days.

It is almost always of evil augury." - Dr E. Lancereaux, MD, Professor of Clinical Medicine, in "The Digestive Disorders of Uraemia", Union Medicale, 8-13 December 1887.

Toxaemia As The Main Factor Upon The Renal Involvement In Hypertension

*"**The death rate from Arteriosclerotic Disease of the Brain, Heart and Kidneys is associated with the symptom of Hypertension, continues to be very high (about 4 times that of Cancer)**, fully 25% of deaths at least in males over 50 years of age is associated with this condition.*

The initiating cause or causes of the 2 associated conditions Arteriosclerosis and Hypertension are still unknown." - in "The Renal Origin Of Hypertension", 1948.

It is know, as it has been shown by experiments surgical experiments in pigs, whereby a kidney from a younger pig was transplanted into a older pig, with hypertension.

After the receiving the new kidney, the older pig no longer had hypertension.

Thus it is known that what causes hypertension is the level of Toxaemia in, and the state of the kidneys being affected from the amount of Auto-Intoxication in the blood stream.

It is also known that the kidneys, can fully recover.

As it has been shown that an American individual, having been diagnosed as needing a new kidney transplant, and placed upon dialysis, having this individual the common sense to seek advise outside the medical trade, found that by eating raw fruit and vegetables only, during 30 days, it no longer needed a new kidney.

Having the medical trade diagnosed the same individual, and finding no fault what so ever in his kidney.

For the kidney, as with all the organs of the body, have the capacity to recover, if the correct changes are made.

Cardiovascular Disease

"Cardiovascular Diseases cover all diseases of the heart and blood vessels, including:

1. Heart Attacks
2. Strokes
3. Atherosclerosis
4. Ischemic Heart Disease
5. Hypertensive Diseases
6. Cardiomyopathy
7. And others

In 2000, around 14 Million people died from Cardiovascular diseases globally, while in 2019, close to 18 Million died." - in "Cardiovascular Diseases", Our World in Data, University of Oxford, 2023.

Cardiovascular Disease Represents 30% of All Deaths Globally

"Cardiovascular Disease is the main cause of disability and premature death worldwide and is projected to remain the leading cause of death.

An estimated 17.5 Million people died from this cause in 2005, representing 30% of all deaths in the world; of these, 7.6 Million were caused by coronary heart disease and 5.7 Million by stroke." - in "A pathological study of the epidemiology of atherosclerosis in Mexico city", Cardiol. Res. Pract., 2014.

> ***"Cardiovascular Disease Remains the Main Cause of Death Globally."*** *- in "European Society of Cardiology", 3 September 2019.*

> ***"More than 4 out of 5 Cardiovascular Diseases deaths are due to Heart Attacks and Strokes, and 1/3 of these deaths occur prematurely in people under 70 years of age. The most important behavioural risk factors of Heart Disease and Stroke are: Unhealthy Diet & Physical Inactivity."*** *- in "Cardiovascular Diseases", WHO, March 2024.*

Cancer

> *"Cancer is a leading cause of death worldwide, accounting for nearly* ***10 Million deaths in 2020, or nearly 1 in 6 deaths."*** *- in "Cancer", WHO, 3 February 2022.*

"In our Clinical Work, we found that Cancer patients were susceptible to Coronary Atherosclerotic Heart Disease. Coronary Atherosclerotic Heart Disease and Cancer were originally thought of as 2 separate diseases. Currently, accumulating studies have focused on the relevance of these 2 diseases. We discovered that Coronary Atherosclerotic Heart Disease was an independent risk factor for Cancer and vice versa." - in "Coronary Atherosclerotic Disease and Cancer: Risk Factors and Interrelation", Front. Cardiovasc. Med., 7 April 2022.

The Relationship Between Atherosclerosis & Cancer

"In the last few years, there has been growing interest in **the relationship between cancer and cardiovascular disease. Atherosclerosis seems to share a common pathophysiological substrate with cancer. Cardiovascular Disease (CVD), and Neoplasms (Abnormal and excessive growth of tissue, this abnormal growth usually forms a mass, which may be called tumor [cancer]), are the first and second leading causes of death, respectively, worldwide.** In recent years, there is stronger interest in the incidence and mortality of CVD in patients treated for neoplasms, as up to 30% of deaths among cancer patients may have a cardiovascular cause.

Common Risk Factors for Cancer and Atherosclerosis

Because Cancer and Atherosclerosis share risk factors, concomitant Ischemic Heart Disease and Neoplasms (Tumours) in the same person are not rare, and 4% to 10% of patients with Acute Coronary Syndrome or Chronic Ischemic Heart Disease have a history of cancer." - in "The Two-way Relationship Between Cancer and Atherosclerosis", Revista Española de Cardiología, June 2019.

The Protective Function of the Liver And Kidneys

"The Wastes of the Body.

Almost everything that the body does in the process of living means the breaking down, or burning, of food; and produces, like every other kind of burning, two kinds of waste — "smoke" and "ashes."

The carbon dioxid "smoke", as we have already learned, is carried in the blood to the lungs, where it passes off in the breath.

The solid part of our body waste, or the "ashes", is of two kinds — that which can be melted in water, or is, as we say, soluble; and that which cannot be melted in water, or is insoluble.

The insoluble part of our solid body waste goes into the faeces and is thus disposed of. The soluble part of the body waste goes by a somewhat more roundabout route. With the carbon dioxid it is poured by the body cells into the veins, carried to the heart, and pumped through the lungs, where the carbon dioxid is thrown off. Going back to the heart it is pumped all over the body, part of it going through a very large artery to the liver, part through two large arteries to the kidneys, part to the skin, and the rest all over the remainder of the body.

The blood goes completely round the body-circuit from the heart to the fingers and toes, and back again to the heart, in less than 45 seconds.

Practically every drop of blood in the body will be pumped through the liver, the kidneys, and the skin, about once every 30 seconds, so that they get plenty of chance to purify it thoroughly when they are working properly.

This sounds rather complicated; but is interesting, be cause it shows how much of a "mind of their own" the different organs and stuffs in our bodies have, or what, in scientific language, we call "power of selection."

The skin glands pick out of the blood those waste substances which they are able to get rid of. The kidneys pick out another class of waste substances, which they are best able to deal with; while the liver which is the most important of all, attacks almost every kind of waste brought to it by the blood, and prepares it for disposal by the: Intestines, Skin, and Kidneys.

The Liver

The liver has a size to match its importance.

It is the largest and heaviest gland, or organ, in the body, and weighs about 1.4 kg, a little more than the brain.

It buds off from the food tube just below the stomach, so that its waste tube, the bile duct — about the size of a goose quill — opens into the upper part of the intestine. **The main work of the liver is to receive the blood from all over the body and to act upon its waste substances, burning them up so that they can be taken up, and got rid of, by the glands of the skin and the kidneys.**

In the process it very frequently changes these waste substances from poisonous into harmless forms; and even when disease germs get into the body and infect it, the poisons, or toxins, which they pour into the blood are carried to the liver and there usually burned up, or turned into harmless substances.

The liver is, therefore, to be regarded as a great poison filter for the entire body.

So long as it can deal with the poisons as fast as they are formed, either by the body itself, or in the food, or by disease germs, the body is safe and will remain healthy.

But if the poisons come faster than the liver can deal with them, as, for instance, when we have eaten tainted meat or spoiled fruit, or have drunk alcohol, they begin to poison our nerves and muscles, and we become, as we say, "bilious."

Our head aches, our tongue becomes coated, we have a bad taste in the mouth, we lose our appetite and feel stupid, dull, and feverish.

Such waste materials as the liver cannot burn down so that the kidneys and skin can handle them, it pours out through its duct into the intestine as the bile.

The bile is a yellowish-brown fluid, which assists the pancreatic juice in the digestion of the food, and helps to dissolve the fats eaten, but **is chiefly a waste product.**

It turns green when it has been acted upon by acids, or exposed to the air.

So that the bile which you throw up when you are very sick at your stomach, is green because it has been acted upon by your gastric juice.

The blood which comes from the stomach and bowels is carried by the portal vein to the liver first and, through that, to the heart, instead of going directly to the heart, as all the other impure blood in the body does.

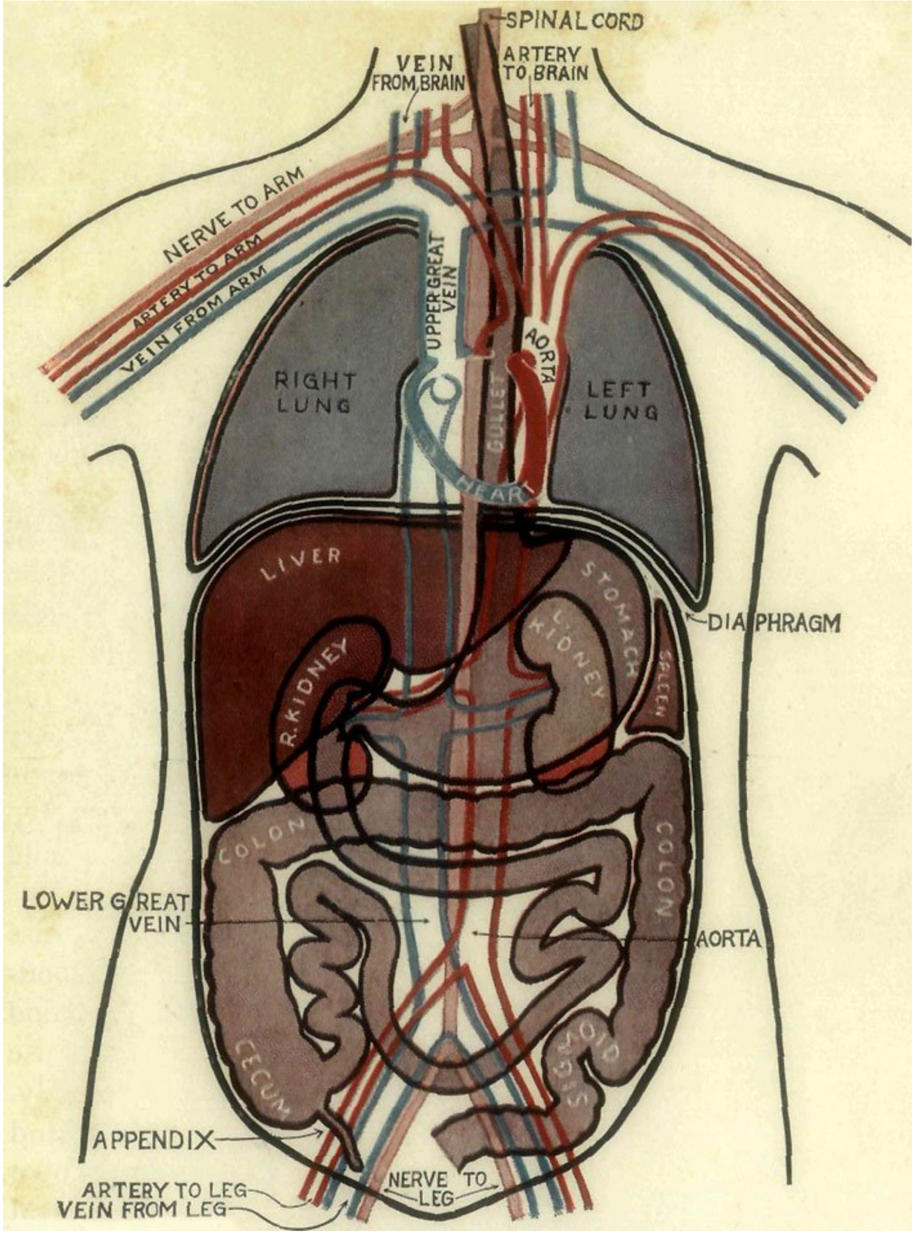
This is owing, in part, to the fact that this blood, being full of substances freshly taken or made from the food, is very likely to contain poisons; indeed, as a matter of fact, blood taken from these veins on its way to the liver, and injected directly into the blood vessels of an animal, acts like a mild poison.

In part, however, this blood goes first to the liver, because the liver, besides being a great blood purifier, is a "blood-maker" in the sense that it changes raw food-stuffs in the blood from the intestines into forms which are more suitable for use by the brain, the muscles, and the other tissues of the body.

Some of the sugars, for instance, the liver turns into a kind of animal starch (glycogen), which it stores away in its own cells.

It also turns both sugars and proteins in the portal blood into fat, part of which it pours into the blood, and part of which it stores away also in its own cells.

Thus the liver owes its great size partly to the large amount of blood-purifying, filtering, and poison-destroying work which it has to do, and partly to its acting as a storehouse of starch and fat, which the body can readily draw upon as it needs them.


SPINAL CORD
VEIN FROM BRAIN
ARTERY TO BRAIN
NERVE TO ARM
ARTERY TO ARM
VEIN FROM ARM
UPPER GREAT VEIN
AORTA
RIGHT LUNG
LEFT LUNG
GULLET
HEART
LIVER
STOMACH
L. KIDNEY
DIAPHRAGM
SPLEEN
R. KIDNEY
COLON
COLON
LOWER GREAT VEIN
AORTA
CECUM
SIGMOID
APPENDIX
ARTERY TO LEG
VEIN FROM LEG
NERVE TO LEG

Outline Diagram Showing General Plan and Position of Body-Machinery

As all poisons formed in, or entering, the body are brought to the liver for destruction, it is in an extremely exposed position, and very liable to break down under the attack of these poisons, whether of infectious diseases, or chloroform, or alcohol, or those formed by putrefaction in the stomach and intestines. This is why those who have lived long in the tropics and suffered from malaria, dysentery, and other infectious diseases, and those who drink too much alcohol, or have chronic indigestion, or dyspepsia, are likely to have swollen and inflamed livers.

The Gall Bladder

The liver has on its under side a little pear-shaped pouch called the gall bladder, in which the bile is stored before it is poured into the bowel.

If this becomes inflamed by disease germs or their poisons, in the blood, little hard masses will form inside it, usually about the size of a grain of corn, known as gall stones.

So long as they stay in the gall bladder, they give little trouble, but if they start to pass out through the narrow bile duct into the intestine, they cause severe attacks of pain, known as "gall-stone colic", and, by blocking up the duct, may dam up the flow of the bile, force it back into the blood again, and stain all our tissues, including our skin and our eyes, yellow; and then we say we are jaundiced.

Jaundice may also be caused by colds or other mild infections which attack the liver and bile ducts and clog the proper flow of the bile.

The Kidneys

The kidneys are another form of blood-filter, **which deal chiefly with waste stuffs in the blood** left from the proteins, or Meats, of our food—meat, fish, milk, cheese, bread, peas, beans, etc.

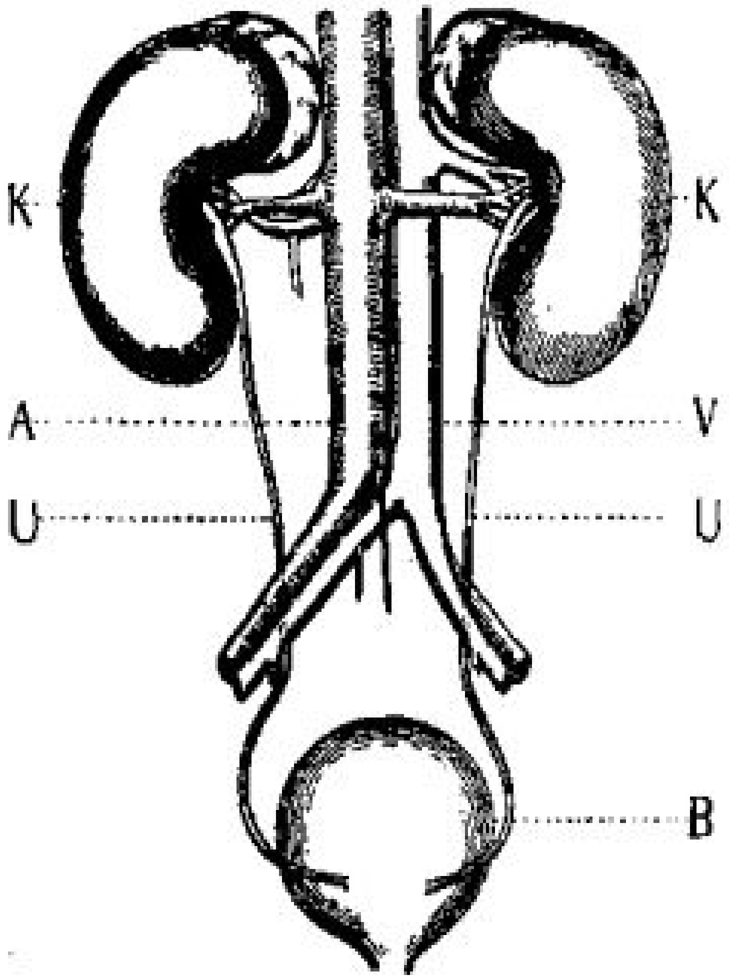
These waste-stuffs, called urea and urates, are formed in the liver and brought in the blood to the kidneys.

These lie on either side of the backbone, opposite the small of the back, their lower ends being level with the highest point of the hip-bones, nearly 15 centimetres higher than they are usually supposed to be.

When you think you have a "pain across the kidneys", it is usually a pain in the muscles of the back much lower down, and has nothing to do with the kidneys at all.

A very large artery carries the blood from the aorta to each side of the kidney, and a large vein carries the purified blood back to the vena cava and heart.

Two smaller tubes about the size of a crow quill, the waste pipes of the kidneys (the ureters), carry the water containing urea and other waste substances strained out by the kidneys and called urine, down into a large pouch, the bladder, to be stored there until it can be got rid of.



The Urinary System

(K, Kidneys; U, Ureters; B, Bladder; A, Artery; V, Vein)

The kidneys then are big filter-glands.

They, like the lungs, are made up of a mesh, or network, of thousands of tiny tubes of two kinds, one set of tubes being blood vessels, and the other set the tiny branches of the kidney tubes which finally run together to form the ureters.

The urine filters through from the spongy mesh of blood tubes (capillaries) into the kidney tubes and is poured out through the ureters.

It is very important that the urine should be discharged as fast as it fills the bladder. Nothing should be allowed to interfere with this; and whenever nature tells you that the bladder is full, it should be emptied promptly, or the poisons which nature is trying to get rid of in the urine may get back into the blood and cause serious trouble.

Diseases of the Kidneys

Naturally, the kidneys, working all the time and pouring out, as they do every day, from 750ml to 1 litre of the liquid waste called urine, are subject to numerous diseases and disturbances.

One of the common causes of these is failure to keep the skin thoroughly clean and healthy, as perspiration is of somewhat the same character as the urine; and if it be checked, it throws an extra amount of work upon the kidneys.

Another most important thing to keep the kidneys working well is to drink plenty of water, at least 6 or 8 glasses a day, as well as to eat plenty of fresh green vegetables and fresh fruits, which, as we have seen, are 80% water.

Remember, we are a walking aquarium, and all our cells must be kept flooded with and soaked in water in order to be healthy.

If the blood becomes overloaded with poisons, so much work may be thrown upon the kidneys that they will become inflamed and diseased and cannot form the urine properly; and then poisons accumulate in the system and finally produce serious illness and even death.

Another cause of disturbance and permanent damage to the kidneys is the habitual use of alcohol.

Even though this may be taken in only moderate amounts, **the constant soaking of the tissues with even small amounts of alcohol may be most harmful to the kidneys, as well as to the liver."** - Dr Woods Hutchinson, AM, MD in "A Handbook of Health", 1911.

"Necraemia, or Death Beginning with the Blood, are terms which I venture to give to those fatal cases in which the chief and most remarkable change is exhibited by the blood.

In Typhoid Fevers and others of the malignant kind, none of the solids of the body constantly exhibit such an early change of function or of structures, as would warrant us in tracing disease and death to them.

It is true, that the functions of many solids are impaired — the muscular and nervous systems, secretion, digestion, assimilation, and nutrition, all suffer, but the very universality of the affection seems itself to point to some cause more general than can be found in any individual function; and such a cause may be found in the blood.

The injurious effect of these poisons may be still more completely prevented when their quantity is small and the living powers are vigorous.

A diarrhoea, a profuse sweat, or a free flow of urine, sometimes carries off the commencing disease.

The intestines, the skin, and the kidneys, appear to be the proper Emunctories through which morbid matter is expelled.

The peculiar factor of the secretions from the bowels in Typhoid Fever, and the beneficial influence of moderate diarrhoea, which removes them in the early

stage of Fever, seem to be an example of the elimination of a morbific matter; and I have before suggested, **that the follicular inflammation and ulceration of the intestines in Fever may arise from the excessive irritation of the follicles in the exercise of this eliminating function.**

Again, **with regard to the kidneys, it has been before mentioned, that granular degeneration, which impairs their function, renders the body peculiarly liable to contract diseases, and to succumb under them.**

This renders the prognosis unusually unfavourable in these cases.

The presence of the bile is often obvious in the yellow colour of the serum and fibrin.

In several cases of fatal **Jaundice connected with structural disease of the liver, I have observed extensive ecchymoses on the legs (bruise caused by blood leaking from broken blood vessels into the tissues of the skin or mucous membranes); and I have already stated that in most of the cases of Purpura which I have seen, there has been imperfect action of the liver.**

The presence of bile in the blood, although sometimes causing tingling, pruritus, and cutaneous eruptions, does not appear to produce local irritation and inflammation, or change of the blood and general dropsy (edema), so remarkably as that of urea does. Andral found that in dropsical sheep, with hydatids in the liver, the albumen, as well as the red particles of the blood, were diminished.

The perspiratory secretion contains lactic acid and lactates of soda and ammonia, which probably proceed from the transformation or decay of the textures, particularly the muscular. Hence these products abound during great muscular exertion; and **when perspiration is checked by external cold, they may be retained in the blood, causing Rheumatism, urinary disorders, or various cutaneous diseases. The very serious effects sometimes resulting from sudden cold on the perspiring body may be partly owing to the same cause, as well as to the disorder produced in the circulation.**

Rheumatism is especially liable to occur as an effect of Cold, where the body is fatigued with much muscular exertion.

Where the skin fails to excrete, an increased task is thrown on the kidneys, whence may result various diseases of these organs; and if these organs fail in the task, the lactic acid accumulates in the blood, and, probably acting as a ferment, causes the formation of more, and of the kindred products, Uric acid and its compounds: these, in inflammatory subjects, excite Rheumatic Fever; and in more torpid frames, various local Rheumatic or Gouty affections.

All these cases are frequently remarkable for the acid character of the cutaneous and renal excretions.

In a patient with Acute Rheumatism, I have found the perspiration on the affected joints more strongly acid than on other parts.

The advantages of this due regard to all the elements of disease in the treatment of Rheumatism may be shewn by the fact, that, with few exceptions, I have found that 3 or 4 days suffice to remove the Fever and Pain in the severest forms of acute Rheumatism.

It seems quite warrantable, to connect with these changes 2 remarkable states of disease, on the pathology of which chemistry has thrown much light, gout and other Uric acid diseases, and Diabetes.

Gout, and the commonest kind of urinary gravel, are now generally considered to depend on the production in the system of an excess of Uric acid.

This acid, being a highly azotised compound, is abundantly generated in those who take a large proportion of animal food, and in whom the digestive and assimilative processes are impaired.

Hence it is produced by high living and sedentary habits.

It is one of the lower forms of animal matter into which the higher principles, fibrin, albumen, gelatin, &c., tend to pass in their progress towards dissolution.

Hence it is produced in excess where there is more azotised matter than is wanted for the reparation of the textures, or than the vital assimilating powers can appropriate for this purpose.

But it probably results also from the decay of the textures, **especially during febrile or inflammatory irritation, during and after which copious deposits of the Urates are seen in the urine.**

The morbid effects of an excess of Uric acid will vary considerably, according to its amount and other circumstances.

The Kidneys are the proper Emunctories by which it is eliminated from the blood, and these sometimes suffer from the irritation which it causes; hence Nephralgia and Nephritis may occur: or the water and alkali secreted with it in the urine may be insufficient to hold it in solution, and it may be deposited in the form of **sand or gravel, or calculus in the kidneys or bladder; and various irritations and obstructions in the urinary apparatus may be the result.**

But sometimes the kidneys may fail in their power of elimination, the Uric acid and its compounds then accumulate in the blood, and may cause various irritations and functional derangements (irregular gout), until at length some circumstance fixes the irritation on a limb, and a fit of regular gout is the consequence.

In this fit, inflammation is excited, with more or less febrile disturbance, which subsides as a copious deposit takes place in the urine, shewing the removal of the morbid matter.

The more acute and fixed the inflammation, and the smarter the fever, the more abundant is the deposit, and the more free is the patient from disease after wards.

On the other hand, when the inflammation is low, changing its place, and with little Fever, it generally tarries long, and the system is not relieved.

It is when Gout thus lasts long, or frequently recurs, that often its material so accumulates in the joints as to be deposited in the form of a plastery or calculous matter, consisting of lithate of soda (chalk stones of gout).

Gout is connected with a more or less permanent disorder of the digestive or assimilative functions. In such cases (chronic), Uric acid seems to be engendered in great abundance, being often thrown off in large quantities in the urine for an indefinite period, yet never leaving the body free.

The urinary excretion is a valuable source of symptoms, not only of diseases of the parts connected with it, but of disorders of other organs, and of the whole system.

The Kidneys, being the chief Emunctory through which foreign, effete, and superfluous matters are eliminated from the blood, it is continually exhibiting changes in quantity and quality, in colour and specific gravity, in its sediments, and in the effect on it of different chemical re-agents.

All these changes furnish symptoms of disease, several of which have been already noticed in connexion with various pathological elements." - in "Principles of Medicine, comprising general Pathology and Therapeutics", 1856.

Direct Hepatic Toxicity

"Certain substances produce a predictable Liver injury.

Other organs suffer in company with the Liver and in most instances Renal damage is more important than Hepatic.

Nausea, Vomiting, and Diarrhoea Reflect Gastrointestinal Injury, and Confusion and Coma signify Central Nervous System involvement.

Renal Damage is usually more important than Hepatic.

Cytotoxic Drugs are Hepatotoxic." - in "Disease of the Digestive System; Drugs and the Liver", British Medical Journal, 27 January 1968.

Chapter 18

Factors In The Causation of Tuberculosis

> ***"Much depends upon the ability of the patient to mobilise his own powers of resistance when placed under ideal conditions, and most examples of active Tuberculosis of the lungs, in such circumstances, will exhibit some degree of improvement in so far as symptoms abate and Toxaemia lessens."*** *- in "Recent Advances in Respiratory Tuberculosis", 1948.*

It is important to understand that the body system is one, in other words, all the body systems are connected, they all interact.

Thus what happens, in one will thus affect the others.

A disturbance in one will necessarily cause a disturbance upon another as well. A lack of something in one, will cause a deficiency upon another.

Thus this concepts of Health, not "medicine", but of Health as fundamental for the Emunctologist to understand, for this will give the Emunctologist the strong and solid foundations to understand the factors in the causation of disorders in the body, and know that Tuberculosis, as every case of such natures, is individual.

In general Tuberculosis; are conditions that have to do with the pulmonary reaction, and the effect this have upon the vitality, and the forces in the body, as related to the blood supply especially, and the gradual disintegration of the activities, and functionings of organs, comes from the impoverishment from the lack of a purified blood stream.

Owing to the aggravated conditions existent in those areas through which the active forces of the disturbance in the pulmonaries arise.

We may find the condition in the blood supply, to be deficient in quantity, in quality, owing to those activities which prevent the oxidization of same in the body-forces, and the effect such deficiency has upon the organs, especially the:

1. **Heart (Hepatic Circulation)**
2. **Liver (Filter & Metabolize)**
3. **Kidneys (Filter & Excretion)**

Then, the activities are to be directed so that there may be the supplying of energies in such a manner that there may be greater purification of the blood supply, which will enable the system to create sufficient of the leucocyte and

the white blood plasm, to encase or destroy the activity of the influences through the pulmonary reaction, in such a way and manner as to allow the assimilated forces in the system to carry sufficient strength and vitality to the body.

Tubercular conditions, at some time involve the whole hepatic circulation; and the destructive forces from such are active upon the liver and the kidneys.

The greater destructive force from tuberculosis is the kidneys and the liver.

For rarely has there ever been a case of tuberculosis without first the kidneys going bad.

Thus there is the need to avoid any irritation upon these two organs.

Thus the cleansing of both the liver, and the kidneys is paramount, in aiding the body to fence the destructive forces from the appearance and multiplication of the bacilli, Tubercule Germ (Mycobacterium tuberculosis).

Physiology of Mycobacterium Tuberculosis

"Slow Growth and States of Low Metabolic Activity.

Like other pathogenic mycobacteria, the tubercle bacillus is characterized by a notoriously slow growth rate, displaying a mean generation time of approximately 24 h, and a chromosomal replication time of 11 h.

While TB incidence is high in absolute terms, it remains low relative to the estimated prevalence of M. tuberculosis infection.

This suggests a mostly stable host–pathogen interaction, with active disease the exception.

It has been proposed that **the stable maintenance of a low level persistent infection through auto modulation of the immune response could allow the host to avoid pathological damage in excess of the risk posed by the residual population, while simultaneously maintaining immune memory."** - in "Handbook of Tuberculosis", 2008.

> *"The tuberculous character of most of the specimens secured for this study was presumed by the presence in the infective material of acid-fast bacteria morphologically indistinguishable from Mycobacterium tuberculosis.*
>
> ***The attempt to incite lesions of tuberculosis in inoculated guinea pigs, or to demonstrate the presence of Mycobacterium tuberculosis by cultural procedure has usually been unsuccessful, and consequently the tuberculous character of lesions similar to this has not been established.***
>
> *This colony was found to consist of acid-fast bacilli which morphologically were significantly like Mycobacterium Tuberculosis.* ***Pathogenicity could not be demonstrated****, however, for guinea pigs, rabbits, or chickens." - in "A Comparison of Different Culture Methods for the Isolation and Growth of Mycobacterium Tuberculosis: An Experimental Study", American Journal of Clinical Pathology, 1 July 1931.*

The Workings In The Body System That Give Rise To Tuberculosis

The tissue in the respiratory system, as related between that assimilated and the character of that produced by the blood's entry into the circulation, must wholly coordinate.

Tuberculosis thus has its beginning in the cellular forces, in the separation of that which becomes active, as the bacilli, or as those cell units that may be active in certain portions of the system, especially so in the soft tissue of the lung itself.

It is the beginning of that of life itself in its relation to a physical organism.

Precaution thus should be taken as to the proper correlation between the activity of the liver and the kidneys in their relation one to another; neither becoming over active, neither becoming dependent upon the other for their part in the eliminations from system, not from that as is seen in liver in its excretions for the good of the building of the cellular forces in the system itself.

For the liver being divided in many lobes, many portions of same functioning almost in the same ratio as various portions of the brain affect the mental system.

And the activities of the motor system of the whole body; for, as an indentation in certain portions or certain centres in the brain itself hinders locomotion in certain portions of the system.

So does that activity in certain portions of the lobes of the liver itself supply, or lack in supplying, that necessary in the element of the creation of the forces through the blood's activity.

Thus there is the need to aid the system to rebuild those cellular forces in the body itself, as to bring resuscitation to the system.

Poor Elimination As A Factor In the Causation of Tuberculosis

So, we must set up, then, in the system, the proper coordination between the eliminating channels of the body.

Let’s not overtax one, at the expense of another.

The system, or nature in itself, attempts to create the bettered conditions, so long as the life plasm in a cellular unit is created through the proper assimilations.

Hence, the diets and the activities in the system, carry on.

When the eliminations through the alimentary canal are choked, either the liver or the kidneys, or both, suffer.

So also does the lymphatic circulation, or the pulmonaries, so one may be given Tuberculosis From Poor Elimination.

Toxaemia As A Factor in the Causation of Tuberculosis

"The purely somatic influence of the disease arises either from the presence of bacillary foci in the nervous tissue itself, or from the action of toxic products carried to the neurons from remote foci, the latter being the disturbing influence in most cases.

The disorganizing effect of tuberculous disease in the nervous tissue may evince itself in different ways.

In localized infections, mental changes of variable degree may accompany a neurological syndrome which is diagnostic of an intracranial lesion, such as brain abscess, a complication found fairly frequently in terminal states, particularly in the presence of a chronic purulent pleural empyema.

In more diffuse lesions there may be marked mental alienation.

Thus, a typical Dementia Praecox (schizophrenia), developed in a patient who within a few days showed unmistakable evidence of meningitis, while autopsy revealed a tuberculous encephalitis, the local phase of a general miliary spread.

The psychoses resulting from such gross pathological lesions of the brain tissue usually take on schizophrenic characteristics.

Closely allied is the delirium produced by the disorganizing action of overwhelming Toxaemia, such as is found in the terminal or acute stages of the disease.

It has been strongly claimed that there is a definite association between Tuberculosis and "insanity."

The fact that the occurrence of "insanity" in Tuberculosis sanatoria does not appear to be unusually frequent is explained by the high incidence of tuberculosis in mental hospitals, which indicates that, when the association occurs, it is the psychosis which manifests itself first.

Infection of the nervous tissue and acute overwhelming Toxaemia play such distinct parts in the somatic nervous influence of the disease that their discussion serves only as an introduction to the study of the operation of Chronic Toxaemia.

Chronic Tuberculous Toxaemia has a definite and obvious effect upon the vegetative nervous system, and this has been amply described by Pottenger and others.

There is little doubt that it influences the nervous system in general and the higher as well as the lower strata of brain structure.

The nervous expression of tuberculous Intoxication is stimulation followed by depression, there being a quantitative relation between the two.

Fatigue may follow prolonged stimulation, or a similar state of depression may be produced by a greater degree of Intoxication than that which produces stimulation. Inasmuch as the patient found in Sanatorium practice is liable to exhibit the combined effects of both forces, the influence of tuberculous intoxication, unaltered by the addition of the purely psychic factor.

Autopsy reports in general uphold the opinion that there are more people suffering from tuberculosis without knowing it than there are who have knowledge of their affliction.

When the resulting nervous disturbances are sufficiently marked to bring the patient to the physician, these disturbances will most naturally be of the depressive type because they are more likely to be subjectively recognized as states of ill-health.

The Toxic stimulation is general, affecting both the psychic and the general bodily functions.

A slight elevation of temperature, if present, stimulates metabolism and further augments the acuity of mental processes and the irritability of the entire nervous system.

Greater degrees of Intoxication may depress both physical and psychic function.

The physical effects may be produced directly by the action of the Toxins on all tissue or indirectly through the nervous system.

Thus the disorders of digestion due to Toxic Disturbances of the Autonomic Nervous System ultimately result in alterations of general nutrition.

Brain tissue will also suffer in nutrition but even before this occurs there is liability to depression of its function by direct action of the Toxins in amounts larger than those necessary to cause stimulation.

Nerve-exhaustion types of this origin are common and simulate true neurasthenia.

In fact Head goes so far as to state that a large number of neurasthenics are in reality suffering from occult or latent tuberculosis, and that this should be considered as a highly probable cause in all cases of neurasthenia when syphilis.

The patient, feeling general depressive effects, will show easily induced fatigue of all functions.

His nutrition suffers, and there are disorders of digestion and evidence of visceroptosis. There is vasomotor instability and the production of skin flushes, dermographia and hyperconsciousness of cardiac action.

There is a general feeling of weakness and easily induced fatigue, while the mental picture is one of depression or, at least, of labile moods.

There is a disposition to brood and become egocentric.

For no apparent reason he becomes irritable, apprehensive, easily fatigued, and changes in his entire outlook on life.

Chronic Tuberculous Toxaemia may act in such a way as to produce mixed or alternating states of depression and of stimulation.

In parenthesis, it may be said that it is possible for the discovery of Tuberculosis to have a corrective influence upon individuals who have already been upset by Chronic Toxaemia.

Selfishness as an outstanding trait of the disease has been discussed by several observers, including Saxe and Fishberg.

The tendency of depressive Toxaemia to produce egocentricity in the exhaustion types has already been mentioned and, when in such cases the awareness of the disease enters with its attendant conflict, there may well result selfishness in its most exaggerated form.

It has been already observed that, while the purely Toxic Condition exists, there may be a tendency to alternating states of general affect because of the humoral variations of the malady.

A patient suffering from the depressive effects of an unrecognized tuberculous Toxaemia is liable to develop a psychoneurosis of hypochondriacal type." - in "The American Review of Tuberculosis", Journal of the National Association for the Study and Prevention of Tuberculosis, 1933.

> ***"Diagnosis: The symptoms of pulmonary Tuberculosis can be conveniently divided into those due to Toxaemia (lack of energy, loss of weight, fever, night sweating, digestive disturbances, anaemia and amenorrhoea), and those which are dependent upon the fact that the lung is the organ involved (cough, expectoration, haemoptysis, dyspnoea and pain in the chest)."*** *- in "Recent Advances in Respiratory Tuberculosis", 1948.*

It thus thus the burden of Toxaemia in the blood stream, which comes from the gastrointestinal system; this burden of toxicity, causes damage to the liver, and all organs in general, and to the kidneys in particular.

A damaged or overworked kidney, is at the foundation of that which is required for the first symptoms of Tuberculosis, to get a foot hold in the body system.

The Impaired Action of Toxaemia Upon the Body System, Which Eventually And Inevitably Leads to Imperfect Action of the Kidneys

"All cases of Rheumatism are Caused by Imperfect Action of the Kidneys, Liver and Skin, **and their inability to throw off poisonous substances, uric acid, etc., from the blood.**

The Galvanic, or direct battery current, acts on these diseases in the most beneficial way, modifying local circulation, allaying the inflammation and quieting the pain.

We have cured persons who have been rheumatic for upwards of 20 years, deformed and distorted, and whose joints were drawn out of shape from this disease.

We can refer to numbers that we have cured of this painful disease." - in "Electricity and Galvanism as Remedial Agents for Disease", 1883.

"The extensive prevalence of the lesions throughout the body is the most important feature brought out by such an analysis, a feature sufficient of itself to maintain the probability that no immediate exciting cause can account for such extensive exudation into the most vital and important of the internal organs.

In every case it might be possible to point out the existence of a pathological condition sufficient to indicate a state of the constitution capable of exercising an influence over the development of exudation from the blood-vessels, whether in the lung or in any other organ.

Between the existence of an exudation, therefore, and the presence of any morbid conditions of the body, such as typhus fever, Bright's disease, synocha (continuous fever), synochus, or variola, we are to recognize the existence of the same relations; for in all of these conditions we have circumstantial evidence of a dyscrasia in the blood.

During Bright's disease, we know that a non-elimination of urea is a constant pathological condition; that during its course there is a great liability to the exudation of liquor sanguinis'm various internal organs, a liability proportioned in some degree to the amount of adulteration which an imperfect action of the kidneys causes in the blood; and that these internal exudations of liquor sanguinis can be justly referred to the condition of the blood alone.

During the progress of typhus fever, it is known that there is also a great liability to exudation from the blood-vessels of various organs, more especially in the lungs, spleen, pleurae, intestines, liver, and pericardium; that the occurrence of these exudations bears no proportion to the apparent severity of the fever; for, frequently, cases of intestinal lesions, as well as lesions of the lungs or spleen, are discovered after death, when no knowledge of their presence could have been obtained from symptoms existing during life; that no immediately exciting cause can account for the exudation; and, lastly, that the number of parts affected, shows the universal nature of the cause.

There can be no better illustration brought forward of the association of exudation from the blood-vessels with a vitiated condition of the blood, than that which is afforded by the exudations occurring during the course of exanthematous diseases.

In the condition of scarlatina we have an exudation in the throat, of which the fauces seem to be especially susceptible.

In rubeola the lungs seem to be the most frequent seat of exudation; in variola the skin and the intestinal canal.

These facts show that, where such exudations into external organs accompany such diseases, where a morbid condition of the blood evidently exists, the exudations must be ascribed in part to that universal and constitutional cause.

The cases of secondary deposits, as well as of tuberculosis, in which an unnatural state of the blood exists, bear the most direct testimony in favour of this view.

The character and amount of organization which the exuded matter attains must, therefore, also be examined in relation to the morbid condition of the

blood; and I hope to be able to show that, **as the blood departs from the healthy standard, so does the character of the exudation change; for the morbid state of the blood is to be regarded as the cause of the peculiarities in the inflammatory products.**

Again, if we look to the immediately-exciting causes of the exudation into the lung, we shall find that they are usually described as those which are also the immediately-exciting cause of Bright's disease, of Typhus Fever, of synocha (continuous fever), or of synochus.

Inadequate clothing, cold, wet, or intemperance have been looked upon as the common cause of all; but how frequently do exposures to all vicissitudes fail in inducing disease, until a change not usually perceived predisposes the individual to morbific agencies?

The change is a gradual one, commencing in the fluids of the body, and brought about under a combination of circumstances, which renders the individual no longer able to resist the influence of morbid causes.

No two individuals being constituted alike, either in mind or body, the relation of any individual to the atmosphere and its changes cannot be precisely the same, at any given time.

The operation of similar causes, therefore, must exercise different effects upon all; and therefore it is found, that at certain periods a combination of circumstances occurs in one or in a number of individuals, arising from causes which have always been in operation, which combination of circumstances is different from all other combinations of circumstances which have existed at any period in the life of the individual, or history of the species.

In the condition of the individual, and his relation to the surrounding elements in which he lives, are to be found those agencies, or that agency, which gives rise to a distemper of a new and unknown form." - Dr William Aitken, MD, Surgeon and Demonstrator of Anatomy in the University of Glasgow, in "Cases and observations illustrating inflammatory effusions into the substance of the lungs, particularly as modified by contagious fevers", 1848.

"In reference to Dr Clark's views of the connection of Cerebral Symptoms, and Black Vomit with Congestion and **imperfect action of the kidneys, we have looked with interest at what our author has to say on the renal function.**

> ***"Almost complete suppression was observed in certain cases.***
> ***In other instances, and this not infrequently, the urine has been abundant, normal in specific gravity and reaction, at times high-coloured, of a rich straw or amber colour, at times highly loaded with lithates, and presenting the brick- dust sediment with more or less colouring matter in different cases. Under other conditions, the urine is found coagulable by heat and nitric acid, and it is occasionally brownish-red, smoke-coloured, or variously tinged, from more or less admixture of blood elements.***

> ***No deficiency of any of the normal constituents of the urine was observed by me in any single instance, where there was not a total or partial suppression of this secretion, which seems to stand in very intelligible relation with the generally depressed condition of the vital powers and the stagnation of the circulation more especially, and was only one of several similar states of suspended action in the system.***
> ***In a few instances, albumen was found in the urine in connection with this depressed condition of the circulation.***
> ***On referring to the results of the post-mortem examinations in yellow fever cases, it will be found that congestion of the kidneys, in common with most other internal organs, was sufficiently often observed."***

The author speaks of urine with high specific gravity and with more or less abundant deposits of variously coloured lithates, as constantly attending the well-marked pyrexia of the sthenic cases, and of the same peculiarities being found in cases classed as hemorrhagic.

The excretion of colouring matter having the usual biliary reaction was often observed in connection with pyrexial and apyrexial states.

Parotitis (inflammation parotid gland), an efflorescent rash, bloody furuncles, are among the symptoms of yellow fever at which we look when we ask to what parts or glands is the poison especially determined." - in "A Treatise on Fever: or Selections from a Course of Lectures on Fever", The American Journal of the Medical Sciences, July 1861.

The Function of the Kidneys

"The kidneys are the sewers of the blood and tissues.

The bowels carry off the remains of food after digestion and also some of the solid impurities, but to the kidneys and skin, especially the kidneys, belongs the important work of carrying off, the impurities in the blood itself, the remains of imperfectly assimilated food, the broken down and worn out elements of the tissues, and should the pores of the skin become clogged, or the bowels sluggish or constipated the kidneys have the labour of both to perform.

The kidneys, like sewer pipes, often become clogged or corroded by the poisonous matter passing out through them and thus results irritation; later, congestion, which if not relieved goes on to more graver and more serious organic changes in the organs themselves.

With imperfect action of the Kidneys, and especially if the Liver is clogged too, we find the following symptoms:

1. Sluggish and tired feeling,
2. Loss of ambition and zest in living,

3. A muddy or pimpled skin, dull and often
4. Bloodshot eyes,
5. Foul breath and coated tongue,
6. Dyspepsia or indigestion,
7. Nausea or sickness at the stomach,
8. Palpitation and weakened action of the heart,
9. Failing eyesight,
10. Swelling of the eyes,
11. Soreness and heaviness of the feet,
12. Headache,
13. Dropsy,
14. Pain in the back and limbs, etc." - in "A treatise on the new method of treatment for nervous, kidney, and genito-urinary diseases", 1891.

"The water acts at once as a stimulant to the presiding nervous system, as a corrective of impaired function in the digestive canal and liver, and as a purifier of the blood.

> ***"Most of the diseases of the skin, especially those which are most disposed to become chronic, are induced, or perpetuated, or both, not only by impaired depurating function of the skin and its follicles, but more especially and remarkably also, by imperfect action of the kidneys, and of the intestinal mucous surface and follicles; the effete and nitrogenised elements and materials, and their combinations, retained and accumulating in the blood, irritating the cutaneous capillaries of predisposed and sensitive surfaces and tissues." -*** *Dr Copland, Dictionary of Practical Medicine."*

- Dr David Manson, MA, MD, in "On the Sulphur Waters of Strathpeffer", 1877.

The State of the Kidneys in Preventing Tuberculosis

"Renal and Urogenital Disease is a prevalent finding of extrapulmonary Mycobacterium Tuberculosis.

Patients can present with unusual complaints not immediately suspicious for tuberculosis.

We describe a 38-year-old man who presented with vomiting and an acute kidney injury.

Imaging studies showed nodules throughout the lungs, retroperitoneum, abdominal viscera, and kidneys.

Tuberculosis in the USA is usually confined to patients with malignancy, immunosuppression.

The tuberculosis bacilli are inhaled into the lung, where they are locally contained by leukocytes and macrophages.

Some organisms cause active pulmonary disease, and others spread to distant locations as metastatic foci.

The initial renal involvement is multiple cortical granulomas.

As host defences decline, the granulomas grow, coalesce, and ultimately result in caseous necrosis.

An intense interstitial nephritis with severe calcification develops as the renal response to the now active infection.

Contiguous spread of the infection may lead to ureteral and bladder involvement.

Hematogenous-lymphatic spread can lead to involvement of the male (prostate-epididymis-testis), and female (uterus-fallopian tube) reproductive sites." - in **"Widespread Tuberculosis including Renal Involvement"**, Proc. Bayl. Univ. Med. Cent., July 2012.

The Link Between Chronic Kidney Disease & Tuberculosis

"Tuberculosis more frequently attacks both kidneys.

In the kidney small gray or yellow nodules are formed which afterwards coalesce and become caseous; they occupy the capsule of the kidney, its cortex and medullary substance, the pelvis and the ureter.

Through the breaking down of these infiltrations ulcers of the mucous parts are formed, and abscess-like cavities in the parenchyma , with a tendency to open into the pelvis.

The tissue, free from tubercles , often shows nephritic changes.

Usually such kidneys are only moderately enlarged, and great enlargement is only to be found when complication with pyonephrosis exists, in consequence of obstruction of the urethra through thickening of its walls, or blocking with caseous masses; diminution in volume is rarely found (Rayer, Rosenstein); the surface is rough and mottled.

When destruction is very marked, caseous trabecula of connective tissue alone remain; in extreme cases the kidney is only a thick-walled cyst with a few calyces, and filled with a caseous or ichorous pulp, rightly compared by Israël to a segment of ulcerated large intestines.

In primary tuberculosis, Beselin has recently described certain processes in the region of the tuberculous inflammation of the mucous membranes of the pelvis as "cholesteatomiform desquamation."

This process consists of epidermoid transformation and hyperplasia of the epithelium, of desquamation of débris of glassylike mother-of-pearl, which together with cholesterin, pus and necrosed tissue are evacuated through the ureter, accompanied by renal colic.

Apart from the cases where tubercular affections of the lungs, the intestines and the lymphatic glands exist, there will be found in men at the same time as renal tuberculosis similar changes in the bladder, the prostate, the seminal vesicles, the testes and the epididymis.

Renal tuberculosis is so frequently associated with pulmonary tuberculosis and with the corresponding disease of the urinary organs that a general characteristic symptomatology is impossible.

We have, like Braatz, observed at different times intermittent albuminuria, or even periodical attacks of hæmaturia, with microscopic signs of slight diffused nephritis.

The presence of elastic fibres, and of remains of connective tissue, simply indicates the existence of a destructive process; but the appearance in the urinary sediment of caseous débris, sometimes containing elastic fibres, is much more important (Ebstein, Vogel, Rosenstein).

Pains in the lumbar regions are paroxysmal, and are either spontaneous or produced by pressure, and their intensity is of the most varying character.

In cases where the ureter is obstructed, they resemble renal colic.

Rosenstein records 2 remarkable cases where the pulmonary affection followed the renal one." - in "Text-Book of Diseases of the Kidneys and Genito-Urinary Organs", Vol.II, 1898.

"The link between Chronic Kidney Disease (CKD), and Tuberculosis (TB) has been known for more than 40 years.

The link between active Tuberculosis (TB), and Chronic Kidney Disease was first reported in a 1974 case series involving dialysis patients.

Numerous publications have since confirmed this link, with hospital-based cohorts and regional registries consistently showing that dialysis is associated with an increased risk of TB.

Both diseases are strongly associated with poverty, and the co-morbidities of poverty, so this syndemic." - in "Tuberculosis and Chronic Kidney Disease: an emerging global syndemic", Kidney International, 2016.

"People with end-stage kidney disease have an increased risk of active Tuberculosis (TB).
Chronic Kidney Disease is associated with a range of Co-Morbidities, and increased risk of Infection, and is classed as an independent risk factor for active Tuberculosis.
A systematic review in 2015 (Risk of active Tuberculosis in Chronic Kidney disease, Int J. Tuberc. Lung. Dis.), found evidence of an increased risk of active TB in patients with End-Stage Kidney Disease compared to the general population." *- in "The association between chronic kidney disease and tuberculosis; a comparative cohort study in England", BMC Nephrology, 1 October 2020.*

Lymphoid Nodules (Peyer Patches)

The Emunctologist should be aware, made aware, knowing, studying the structures, of the Peyer's Patches; and its relationship to the maintaining and extending of life in the physical body.

Clinical Experiments should be carried out by the Emunctologist Profession, and book should be written recording its findings on same.

"Peyer Patches are found a few in the Jejunum, and many in the Ileum.

The wall of the small intestine is made up of 4 main layers:

1. Mucosa
2. Submucosa
3. Muscularis propria
4. Serosa

The innermost layer is the mucosa. It is composed of 3 separate layers: Epithelium, Lamina Propria, and Muscularis Mucosae.

The mucosa is the site of absorption of nutrients and water from the intestinal lumen.

The submucosa is the strength layer of the bowel wall and is composed of dense connective tissue.

When completing a bowel anastomosis, it is important to incorporate suture through this layer of tissue to ensure integrity of the anastomosis.

Blood Vessels and Lymphatics, including Peyer Patches and Brunner's Glands, are found in this layer of the Bowel Wall.

The Meissner, or submucosal plexus, is also located in the submucosa and is an integral component of the Enteric Nervous System (ENS).

It is responsible for regulating bowel motility and secretion in the mucosal layer.

The muscularis propria is composed of 2 smooth muscle layers, an outer longitudinal layer, and an inner circular layer.

The myenteric, or Auerbach plexus, is situated between these 2 muscle layers and, like the Meissner plexus, helps control bowel motility and secretion.

The serosa is the outermost layer of the bowel wall and is a single layer of mesothelial cells.

Plicae circulares are transverse folds of mucosa and submucosa that aid in absorption of nutrients by increasing the surface area of the small intestine threefold.

These folds are deep and visible on gross inspection and on radiographic imaging, even when the small intestine is distended.

Peyer Patches are specialized aggregates of lymphoid follicles in the lamina propria.

They are found along the antimesenteric border and are most abundant in the ileum. Peyer patches play an important role in mucosal immunity by recognizing and processing antigens.

The germinal centers contain B lymphocytes, and T lymphocytes are in the interfollicular area.

A specialized immune cell, the microfold cell or M cell, can be found in the epithelium overlying the lymphoid follicles.

These cells are important in passive immunity by transporting antigens from the luminal surface to antigen-presenting cells into the lymphoid follicle.

Microfold (M) cells are specialized cells that form an essential part of the host mucosal defense by sampling intraluminal contents for pathogens and foreign antigens.

They are located in the follicle-associated epithelium surrounding Peyer Patches, and in isolated follicles, the appendix, and extraintestinal Gastric Mucosa-Associated Lymphoid Tissue (MALT).

M cells are so named because of the presence of microfolds on the apical surface.

M cells originate from stem cells in intestinal crypts, and share a common precursor with enterocytes, goblet cells, enteroendocrine cells, and Paneth cells.

M cells have a characteristic morphology of the basolateral surface.

They possess a marked concavity that allows close contact with antigen-presenting cells.

The function of M cells is transcellular transport.

They internalize substances from the intestinal lumen and transport them across the epithelial barrier to the basal membrane, where interaction with immune cells can take place. M cells have been demonstrated to transport a variety of particulates.

Dendritic Cells (DC) in the Small Intestine:

Dendritic Cells in the small intestine play an important and interconnected role in promoting a tolerogenic environment to commensal bacteria.

They exist in several areas, notably in Peyer Patches of the small intestine, in isolated lymphoid follicles, and in mesenteric Lymph Nodes.

On encountering foreign material, the Peyer Patches and lamina propria DCs migrate to mesenteric Lymph Nodes, where they present antigen to T cells.

The origin of DCs in the small intestine appears to be from a monocyte precursor.

The basic subtypes of Dcs in small intestinal Gut-Associated Lymphoid Tissues (GALT) are similar to other lymphoid organs in the body with a population of conventional Dcs and plasmacytoid DCs." - in "Shackelford's Surgery of the Alimentary Tract", 2019.

The State of the Lymphatic System in Tuberculosis

"The principal mode of origin of Tuberculosis, infection by way of the intestinal tract as the most frequent source.

Attention would naturally be drawn to the frequency in children of tuberculosis of Lymph Nodes, especially the cervical nodes — a fact long established by clinical experience. Some time previously, and while this discussion was going on, I had, as assistant in the Pathological Institute, performed a large number of autopsies upon children. I had noted the frequent, often very extensive, and sometimes even general, tuberculosis of the lymph nodes, and its primary occurrence, especially in relation to pulmonary tuberculosis, in children.

In the following years (1898-1900) I performed as many autopsies upon children as possible, with a view to demonstrate the frequency of tuberculosis in the various groups of lymph nodes.

I paid especial attention to the cervical nodes, and, in connection with them, to the tonsils.

During a sojourn in Leipzig in the summer of 1898, the investigation of about 30 autopsies in children.

Having become professor of pathology in the University of Christiania in the summer of 1900, I was enabled to take up these investigations more extensively and to commence a systematic and broader study of the entire subject.

It is upon the results of these studies, made from January, 1901, to April, 1904, that my conclusions are mainly based.

I shall also, to some extent, consider my earlier investigations (1898-1900) because they help to elucidate certain points in regard to tuberculosis in children, although it is insufficient in other respects to form the basis of conclusions.

It was originally my plan to occupy myself with tuberculosis of childhood only, and especially its primary localizations, with particular reference to the lymph nodes. However, the opportunity to investigate a large number of autopsies in adults has led me to consider those aspects of the occurrence and evolution of tuberculosis in adults which are directly related to the disease in children.

Thus the scope of my work has become much wider, and I trust that in this manner observations of importance have been added.

The facts concerning adults over 15 years which I have attempted to elucidate are the following:

1. The frequency of tuberculosis in adults in general, as arrived at from statistics.
2. Lymphatic tuberculosis in the adult, its frequency, localization, and connection with other tuberculous affections, especially with tuberculous infection in childhood.

3. Primary localizations outside the respiratory tract, especially in the digestive tract.

My material has been obtained principally from the Pathological Institute, from private autopsies, and from the Municipal Hospital of Christiania.

Methods Employed

My work has concerned principally the lymph nodes of children. At each autopsy particular attention was directed towards the 3 chief groups, those of the neck, of the chest, and of the abdomen.

In the neck, together with the mucous membrane of the throat and the tonsils, the superficial and deep groups of nodes, both superior (submaxillary), and inferior (superficial and deep cervical, and supraclavicular), were systematically examined at every autopsy in children.

Most frequently changes were observed in the submaxillary nodes.

In general the use of the term cervical nodes is meant to signify the submaxillary groups.

In the thorax, the nodi bronchiales, nodi hili pulmonares, nodi tracheales, and nodi mediastinales (sometimes also the nodi axillares) were examined.

In the literature most frequently the term “bronchial node” is used collectively; here, so far as possible, the special groups have been kept apart.

The lungs, of course, were always carefully examined.

In the abdomen, the mesenteric nodes were examined (before separation from the intestines); also the retroperitoneal and sometimes the inguinal nodes, and, of course, the entire intestinal tract.

At first the investigation was mainly directed to the cervical nodes, the throat and tonsils, especially in the examinations made before 1901.

We come now to my own investigations. At first the results of my work in Leipzig in the summer 1898, 30 children came to autopsy; microscopic examinations were made, mainly of the lymph nodes, and especially of the cervical group. Tuberculosis was demonstrated in 9 (30%); in 5 of these as the cause of death (ages 8 months, 1 and 1/2, 1 and 1/2, 2 and 1/4, and 4 and 1/2 years respectively), while in the other 4 cases it was an accidental finding, in 2 (6 and ¾ and 8 years old) exclusively in the bronchial and hilus nodes and demonstrable macroscopically, in the other 2 only microscopically (in 1 child in the mucous membrane of the throat and cervical nodes, in the other both in the cervical and hilus nodes). Of the 5 children dead of tuberculosis, in 3 the starting point was in the intrathoracic nodes and in the lungs; in the other 2 there was an almost universal lymphatic tuberculosis, which in 1 of the cases seemed to have commenced in the cervical nodes.

In the other 21 children (70%), 11 of whom died in the 1st year, 6 in the 2nd, 3 in the 3rd, and 1, 6 and 1/2 years old, there was no evidence of tuberculosis; in all of them the cervical nodes were examined microscopically, in most of them also the bronchial nodes, but only in about 1/4 the mesenteric nodes.

The latent and obsolete tuberculosis was most frequently located in lymph nodes which were caseous, and partly in the lungs, in the latter case, as a rule, together with changes in the thoracic lymph nodes.

The lymph nodes within the thorax were found to be infected most frequently (25 times), the cervical nodes and tonsils 9 times, and the mesenteric nodes 7 times. It is a striking fact that virulent bacilli were demonstrated most commonly in very young children who also formed the bulk of the autopsy material.

Not less than 10 of the 18 cases were in children less than 1 year of age, 3 were between 2 and 3 years, and only 3 over 3 years.

It is also a noteworthy fact that virulent tubercle bacilli, as a rule, only have been demonstrated in certain groups of lymph nodes, oftenest in the cervical nodes. Thus, the cervical nodes gave positive result in not less than 13 cases, to which 1 case must be added in which both the cervical and mesenteric nodes gave positive results, and also 1 with positive results from the cervical, tracheal, and mesenteric nodes.

Mesenteric Nodes

The more so as the address of v. Behring on the routes of infection has caused more attention to be given to the digestive tract in recent discussions, and because many facts point to this tract being a more frequent place of invasion than generally supposed.

The cases of simultaneous occurrence of latent tubercle bacilli in several or even all groups of Lymph Nodes Are of Interest.

It is a noteworthy fact that; the cervical and (perhaps somewhat later) the mesenteric nodes first become swollen. This is the general rule.

In a given case the cause of death naturally is of great importance. Of the cervical nodes the nodi cervieales profundi superiores show a particularly early enlargement (these nodes drain the pharynx, larynx, tongue, etc.).

The bronchial, hilus, and tracheal nodes, on the other hand, are involved later.

In the first weeks or months after birth these nodes are not swollen and so small as to be difficult of recognition.

Hence, the irritating substances, including the micro-organisms, which cause the swelling of the nodes, appear to reach the nodes in the chest relatively late.

This is clearly borne out by the study of cases.

Tubercle Bacilli found in the human body as the cause of various tuberculous affections also possess a variable virulence.

Among other reasons, this is also suggested by the various ways in which Tuberculosis May Appear and Develop.

Experiments with different strains of tubercle bacilli and their virulence in animals also seem to point in the same direction.

Numerous inoculations in animals of tuberculous material of various kinds have also taught me, that the time which elapses before the death of the animals from tuberculous infection varies greatly, a phenomenon not otherwise readily explained than by difference in virulence.

Everything considered, it appears plausible to assume that the latent tubercle bacilli not rarely have shown a less virulence than usual.

This also is in accord with the experiments of Perez and of Manfredi and Frisco.

One of the earliest investigators of the frequency of enlargement of lymph nodes in children is Volland, who also deserves credit for having at an early time brought up for discussion the question of the connection between tuberculous lymph nodes in childhood and a later pulmonary tuberculosis.

Hence, about 94% of the children between 7 and 12 years had enlarged cervical nodes.

Volland, **he believes that such infection exists in numerous cases, and on this he bases his theory of infection with tubercle bacilli from skin and mucous membranes by means of dirt and uncleanliness, and here he places the cause of eventual later infection of the internal organs, particularly the lungs.**

Case 1 — Child 2 months and 6 days old.

The tonsils were not enlarged, the cervical nodes slightly so. One node was examined microscopically, and no tubercles found.

The bronchial and hilus nodes were considerably enlarged and caseous (contained numerous tubercles).

The lungs were studded, partly with scattered greyish yellow granules, partly with tubercles in groups, and contained also larger, firm, caseous, consolidated areas which showed beginning softening; microscopically ordinary tuberculous tissue and masses of tubercle bacilli.

Here and there tubercles in the liver and kidneys; none in the mesenteric nodes.

Case 2 — A female child 2 and 1/2 months old, who was well until about 1 month after birth, when diarrhea with mucous and bloody stools set in.

Numerous miliary tubercles in the lungs, especially the right; in the right upper lobe also an almond-sized caseous consolidated portion.

The tubercles between the lobes and beneath the pleura were arranged in bead-like rows proceeding from the hilus of the lung.

The bronchial and hilus nodes were enlarged to the size of beans, caseated; perforation into the bronchi could not be demonstrated.

The cervical nodes were enlarged; in a few of them as well as in a few mesenteric nodes caseous foci were found.

Tubercles were found in the spleen, liver, and some of Peyer's Patches.

Case 8 — Child 2 months and 2 days old who was with its tuberculous mother for a month when the mother had to be taken to a hospital, where she died from pulmonary tuberculosis.

The child suffered from enteritis, and steadily lost in flesh.

At autopsy the bronchial nodes were much enlarged and tuberculous, the mesenteric nodes also enlarged, and there were miliary tubercles in all the organs.

What does general experience teach as to children born of tuberculous mothers?

First it must be stated that tuberculous women not rarely abort or give birth to still-born infants in which tuberculous changes rarely have been demonstrated.

The causes of the abortions and still-births seem to vary much: infection of the fetus in utero in rare cases; **intoxication of the fetus from the mother on account of the latter's tuberculosis; poor condition of nutrition in the mother and thereby also of the fetus; and tuberculous changes in the placenta with their effect on the nutrition of the child must not be forgotten.**

It has been shown that most children born dead or alive of tuberculous mothers show no signs of tuberculous infection.

In this connection it is noteworthy that in the last 6 years 261 infants still-born or dead a few days after birth were examined at the pathological institute. Not a few were born of tuberculous mothers.

Tuberculous changes were not demonstrable in a single case.

It must also be mentioned that among, children which had lived for some time many were born of tuberculous mothers but were themselves without any trace of tuberculosis.

All these observations like similar ones published elsewhere speak against frequent intrauterine transmission of tubercle bacilli.

Whether intrauterine transmission is sufficiently rare to be left out of consideration practically (as claimed by Robert Koch) is another question.

Can tubercle bacilli transmitted to the child in utero remain latent in the organs, for instance, the lymph nodes, later to proliferate and cause active tuberculosis.

The theory of congenital latency of tubercle bacilli, however, is far from being proved.

It seems to be true in general that the body of the new-born is a favourable soil and that infection with tubercle bacilli is rapidly followed by active tuberculous inflammation.

How early may one suppose that a child infected with tubercle bacilli immediately after birth dies of tuberculosis?

It is of course out of the question to give definite figures in days, weeks, or months.

Many factors are brought into play: The quantity of infective agent, its virulence, and the power of resistance in the body. Infection most frequently takes place through the intestinal tract, and already in infancy.

In later childhood, however, both tuberculosis of the bronchial nodes and miliary tuberculosis decrease in frequency while that of the intestines and mesenteric nodes increases.

Froebelius also points out that pulmonary tuberculosis in infants often appears in the trail of intestinal and pulmonary affections.

Geill, in his extensive work (Denmark), is mainly concerned with lymphatic tuberculosis.

In 288 Cases of latent Tuberculosis in children the:

1. **Bronchial Nodes were involved 262 times**.
2. Cervical Nodes were involved 39 times.
3. Lungs and Pleurae was involved 125 times.
4. Mesenteric Nodes were involved 59 times.
5. Spleen was involved 47 times.
6. Liver was involved 38 times.

In 142 cases the lymph nodes only were attacked, namely the bronchial nodes 109 times; mesenteric, 22 times; bronchial and mesenteric, seven times; bronchial, cervical, and mesenteric, 3 times; bronchial and cervical, once.

In 22 cases the tuberculous process was considered arrested and in 40 cases almost completely so.

Of the 288 Cases (from 902 Autopsies):

1. The mesenteric nodes alone were affected in 23;
2. Both the abdominal and thoracic organs in 77 cases; possibly 11 of these cases must be added to the first group as probable **primary Intestinal Infections** the number of cases of which then would be 34, or 11.8% of all tuberculous cases.
3. **The thoracic organs were affected in 188 cases (in 78 cases the bronchial nodes (primarily), and lungs together),** sometimes also the cervical nodes; in 109 cases the bronchial nodes (in 1 case also the cervical nodes).

To this group must also be added 66 cases of the second group as of probable thoracic origin, which gives a total of 254 cases or 88.2% of all tuberculous cases.

Of the lymph nodes in the chest the hilus nodes were oftenest attacked; then those at the bifurcation of the trachea; in these groups the changes were marked.

When the cervical nodes were involved Geill believed them to have been secondarily infected by an ascending tuberculosis.

He concludes that inhalation tuberculosis is the most frequent form in children as well as in adults.

In Hecker's 97 fatal cases the lymph nodes were affected in 90 cases: bronchial and mediastinal 63; mesenteric 26; cervical 12; retroperitoneal 9; the lungs were involved in 74 cases; the intestines in 22, etc.

In the 50 latent cases the localization was in the bronchial nodes in 38 cases; mesenteric 5; cervical 3; also frequently in the lungs but as a rule secondarily from the bronchial nodes.

Boltz in his **176 fatal cases of tuberculosis in children, found the respiratory organs attacked in 131 cases**; involvement of the bronchial nodes was absent in 3 only. **In 72 cases (41.3%) the digestive organs were affected,** how often together with the lungs is not stated. The result of the study of the frequency of the various primary localizations of tuberculosis by English authors are quite remarkable.

Thus Woodhead, **in 127 carefully examined cases of tuberculosis in children found tuberculous ulcers in the intestines in 43 cases** (it is not plainly stated whether the respiratory organs also were affected).

The mesenteric nodes were tuberculous in 100 cases; and affected alone in 14 of these (or in 11% of the autopsies, especially at the age between 1 and 5 and 1/2 years; together with the hilus and mediastinal nodes in 69 cases, with the lungs in 62 (most frequently recent tuberculosis); and associated with tuberculous enteritis in 18 cases.

In 27 cases (about 21%) the hilus and mediastinal nodes were involved when the mesenteric nodes had escaped.

Still in his 269 cases of tuberculosis in children found the lungs attacked in 210 cases, **the intestines and peritoneum in 141 cases.**

The lymph nodes give the best starting point to determine this.

He came to the conclusion that the lungs were primarily attacked in 138 cases, **the intestinal tract was primarily involved in 63 cases**, or 23.5%; 5 of these were 6-12 months old; 15, 1 to 2 years; 6, 2 to 3 years; 11, 3 to 4 years, etc.

Infection by way of the lungs was most frequent; after the age of 5 years, however, equally frequent by the intestinal tract.

Of 43 cases of latent tuberculosis the lungs were affected in 26, the intestines in 16 and the ears alone in one case (the mesenteric nodes alone in 9 cases).

Shennan collected 355 cases of tuberculosis in children from an Edinburgh hospital. He succeeded in determining the primary focus in 331 cases and 93 of these were cases of alimentary tuberculosis; in a later series of 45 cases, 11 were abdominal; in all 104 abdominal cases in 376, or 27.8%.

In connection with these statistics it must first be noted that by primary seat in the respiratory tract usually is meant tuberculosis affecting the lungs or lymph nodes within the thorax (bronchial, hilus, and tracheal nodes).

Under primary seat in the digestive tract is included not only tuberculosis of the intestinal tract and the lymph nodes connected with it but also primary tuberculosis of the tonsils and cervical nodes.

The lungs, then, are regularly secondarily infected.

As my observations plainly show, this most frequently takes place in this manner: that the bronchial nodes rupture into a larger bronchus, generally near the hilus, and thus a secondary caseous bronchopneumonia is set up in the area of distribution of this bronchus.

Such a mode of distribution will regularly lead to the development of progressive pulmonary tuberculosis, and further, often to a dissemination of the disease in the other internal organs where miliary tubercles, as a rule, are found, as in other cases of advanced tuberculosis of some internal organ.

The easy and rapid dissemination of tuberculosis through lymph and blood channels is characteristic of tuberculosis in childhood.

However, the lungs may be infected from the nodes in other ways, such as by retrograde transport through the lymph channels.

The invasion here takes place from the hilus and proceeds along the lymph channels and nodes which accompany the bronchi; the interalveolar connective tissue becomes involved, then an intra-alveolar process is set up and finally we have a pulmonary tuberculosis with marked caseation and rapid extension.

Infection of lung tissue from lymph nodes in the chest or elsewhere may also take place by the blood stream.

The possibility of infection from the intestinal tract after the intestinal mucosa has been passed and tubercle bacilli have entered the blood either directly or after having forced their way through a greater or smaller part of the lymph vascular system.

The occurrence of latent bacilli in mesenteric lymph nodes might point in this direction, and experiments on animals, in which, after feeding tuberculous material, only pulmonary tuberculosis was found, have established that this mode of infection is not of little importance.

In our cases we most frequently found the lymph nodes of the chest affected together with the lungs, so it is most natural to look for the infection there.

Finally, we see that tuberculous processes, for instance in the lymph nodes, may extend to the lung tissue and infect it directly.

One point must be emphasized: even when the thoracic organs are found most affected at autopsy the clinical history may point either to early involvement of the cervical nodes and a descending infection of the throat, or to preceding intestinal infection of long duration.

We cannot deny the possibility of **hematogenous infection of a large part of the lymphatic system.**

The Lymph Nodes seem to be a favourite location for the tuberculous bacilli also in cases of henlatogenous infection.

This is well known to be so in the certain cases of tuberculosis in man and animals (the localization of congenital tuberculosis of man and animals is also remarkable; the lymph nodes especially affected are the periportal, retroperitoneal, and bronchial nodes).

It is then natural to assume a similar mode of infection in certain cases, especially in the first months of extra-uterine life. As often, and probably much oftener, the infection spreads from a certain primary focus to the other groups.

The most frequent findings are the following: Swollen and generally caseous nodes beneath the lower jaw, and along the entire neck (generally decreasing in size downward), sometimes also in the supraclavicular and axillary regions and, further, in the posterior mediastinum along the trachea, in the pulmonary hilus, and outwards along the bronchi; finally in the mesentery and retroperitoneal tissue from the diaphragm downward along the spine and iliac vessels, and sometimes extending to the inguinal regions.

Apparently the affection everywhere is equally advanced, equally old.

Such an extension may take place in many ways.

The one most commonly thought of is extension from the nodes within the chest in various directions, both because these nodes, according to general opinion, most frequently are found primarily attacked, and because not rarely the affection in this locality appears more marked and perhaps older than in the other localities.

Accordingly, the nodes in the hilus of the lung, in the bifurcation of the trachea, and along the trachea most likely have been primarily infected, and from here the infection has spread outward along the bronchi, upward along the trachea to the neck (where, however, the nodes situated highest up very often are most affected), finally downward in the retroperitoneal tissues, and from here to the mesentery and along the iliac vessels, etc.

Extension from the thoracic to the retroperitoneal nodes is often very plain and conspicuous.

This mode of extension is, in fact, quite frequent, however, the point of origin may also be in the cervical nodes.

In that case we generally find enlarged nodes along the entire neck, generally decreasing downward; then the supraclavicular and axillary nodes (very generally, as in surgical experience) are attacked, the process descending further to the posterior and anterior mediastinal and other thoracic groups, and finally to the retroperitoneal and other abdominal nodes.

Even where the entire clinical picture decidedly points to a descending cervical lymphatic tuberculosis and where the swelling decreases downward to the clavicle, one finds, as a rule, that it then again increases downward to the hilus of the lung.

Grawitz has also maintained the importance of a descending tuberculosis from the tonsils and cervical nodes to the tracheal and bronchial nodes and finally attacking the lungs. Aufrecht, Beckmann, and others also lay the main stress on infection of the tonsils.

Finally, one may have an ascending tuberculosis from the abdominal lymph nodes to the chest.

The infection, which in such cases probably has taken place through the intestinal mucosa, first attacks the mesenteric nodes, and extends to the retroperitoneal nodes and further to the various groups situated in the chest and neck.

On feeding tubercle bacilli from chickens to rabbits, mice, and guinea pigs the intestinal follicles, mesenteric and submaxillary nodes were first infected; after 7 weeks the lungs became involved, and in the 3rd month the bronchial nodes, etc.

Tuberculous Inflammation

In connection with the spread of various morbid processes, especially inflammatory conditions and tumors.

It has long ago been proved (Weigert, in particular, as early as 1884 [Jahrb. f. Kinderheilk. 1884], emphasized the communications between the lymphatic channels of different regions and their importance in the spread of Tuberculous inflammation within the lymph vascular system); that extension to other groups of lymph nodes, and lymph vessels may take place comparatively easily in a direction opposite to that of the lymph current.

This occurrence is facilitated when some lymph vessels have become obliterated; the extension will then take place through the capillary communications which exist between the various regions.

In the formation of Carcinomatous Metastasis we also observe an upward extension by continuity Through the Lymphatics along the spine, subsequently reaching the nodes in the posterior mediastinum and extending further to the neck.

The numerous subcutaneous inoculations of guinea pigs, which I have performed in connection with this work, have shown that the infection first has passed to the inguinal nodes, then to the retroperitoneal nodes and to the liver and spleen, thence upward to the posterior mediastinal and hilus nodes and finally to the supraclavicular and cervical nodes.

Later the lungs become the seat of scattered tubercles, apparently by lymphogenous infection from the hilus nodes, or perhaps by way of the blood.

Most frequently the extension appears to be by the Lymph Stream, but the tendency in children to rapid and frequent infection of the internal organs and to generalization of the Tuberculosis also points to the blood stream as a frequent route; and as the Lymph Nodes must be considered especially susceptible, there is nothing against the assumption that they have been infected by way of the blood.

Tubercle Bacilli May Pass Through the Intestinal Mucosa, and not cause tuberculous changes until the retroperitoneal, or even the thoracic, Lymph Nodes have been reached.

It is shown by clinical observation that **Tuberculosis of the lungs, and thoracic lymph nodes sometimes Is Preceded by Enteritis (abdominal pain, diarrhea, and vomiting) of long duration.**

This route of infection, ought to be borne in mind, and especially when the mesenteric and retroperitoneal lymph nodes, and the Thoracic Viscera are Diseased.

A tuberculous infection as a rule is attended with local changes in the corresponding Lymph Nodes, but at the same time it must be emphasized that dissemination may take place rapidly and easily to the different systems of organs through the different natural vascular systems.

The work on Tuberculosis in children gradually led me to consider tuberculosis in adults, its connection with the disease in childhood and its primary localizations, especially in the lymph nodes and intestines.

The Primary Location of Tuberculosis Outside the Respiratory Tract in Adults: With special reference to its Occurrence in Lymph Nodes in its Relation to Pulmonary Tuberculosis in Adults

In regard to the third case, that of a woman 24 years old, it was stated that when quite little she had "glands in the eyes", at 10 "glands in the stomach", and at thirteen "glands in the neck", and that she was operated on for the latter affection at 18. She died at 24 after an illness of half a year.

Aside from comparatively recent **pulmonary tuberculosis and small intestinal ulcers, there was quite marked tuberculosis of the Lymph Nodes** which were enlarged to walnut-size, caseous, and partly calcified; the disease was most marked in the thorax (tracheal and hilus nodes) and in the mesentery.

It may be supposed that a descending lymphatic tuberculosis originated from the lupus on the left ear; and as the tuberculosis of the lymph nodes appear to be oldest and most pronounced the pulmonary involvement was probably secondary.

The cases of certain or probable primary infection through the intestinal tract must be given special mention.

The oldest tuberculous changes appear to be in the digestive tract, viz., in the tonsils and, more marked, in the intestines; the involvement of the latter, at any rate, is not secondary to tuberculosis of the respiratory tract.

There were also 9 cases in which primary Tuberculosis of the mesenteric and retroperitoneal nodes was demonstrated, in 3 cases associated with involvement of other nodes, but from its appearance older and more marked than the latter affection; in 6 cases the abdominal nodes only were involved.

The lymph nodes attacked were always caseous. **In these cases we may assume a primary infection through the intestinal tract, at any rate when the mesenteric nodes were involved.** We have here a primary lymph node tuberculosis which we must assume to have originated in the mesenteric nodes and to have ascended.

Hence, there were altogether 14 cases of primary infection of the digestive tract (intestine, abdominal nodes, tonsils).

This constitutes only about 2% of the total 736 autopsies, and about 4% of the 375 autopsies in which tuberculous changes had been demonstrated.

If to these cases we add those of primary localization outside the respiratory and digestive tracts and some of the primary lymphatic cases, the bulk of the remaining cases depends on primary infection through the respiratory tract, which in the great majority of the cases (at least 90%) is primarily attacked.

However, in most of the latter cases, the lesions consist of tuberculous inflammation of lungs and thoracic nodes which is often completely healed.

On the other hand, the cases in which the disease originated outside the respiratory tract most frequently terminated fatally and really should be considered together with the 167 cases of fatal Tuberculosis.

Case 4. A woman, aged 21; as a child she had enlarged cervical nodes (which did not suppurate), and chlorosis at 10; otherwise well until 2 attacks of appendicitis at 19; since then she was not quite well, **was especially troubled by constipation**, felt weak, and steadily lost in flesh.

After the appearance of edema and increasing marasmus she died 15 September 1902. Autopsy; Extreme emaciation; pronounced enteroptosis; also anemia and considerable atrophy of all organs.

Bilateral bronchopneumonia. Tonsils small, without scars.

Cervical lymph nodes on both sides much enlarged, forming chains of completely caseated nodes from hazelnut to walnut size (a softened few nodes at the back of the neck).

They continue downward in both supraclavicular regions; in the posterior mediastinum along the esophagus and aorta where there are shrivelled calcareous or pultaceous nodes of hazelnut size; smaller nodes in the pulmonary hilus (not along the bronchi).

In the apex of the right lung three small encapsulated caseous or calcareous nodules.

In lower ileum, in the cecum and part of the ascending colon there are old contracted tuberculous ulcers with marked thickening of the intestinal walls and adhesions to surrounding structures.

In the mesentery a number of pea-size calcareous nodes; likewise in the retroperitoneal connective tissue above the pancreas, and in the hilus of the liver and the lesser omentum. A direct connection with the posterior mediastinal nodes could not be demonstrated. Then the intestinal tuberculosis must be looked upon as an old primary tuberculous affection.

The small nodules in the lungs are most probably secondary, due to hematogenous infection in an organism, a whole system of which, namely, that of the lymph nodes, for years had been permeated by tuberculosis.

The disease of lymph nodes must be considered primary, that of the lung secondary. Large portions of the lymph node system may be infected simultaneously with tubercle bacilli brought by way of the blood channels, and deposited in the lymph nodes as localities predisposed to infection.

The Infection In New Born Babies

The infection might then be imagined to have taken place before birth through the placental circulation, and this possibility cannot be excluded, especially in cases of young persons with tuberculous affections dating back to the first years of life, and perhaps particularly in cases in which the chief localization is in the lymph nodes of the hilus of the liver, the retroperitoneal nodes, etc.

Or, the infection may have taken place post partum, a considerable number of tubercle bacilli having entered the blood stream (directly or after first having passed part of the lymph vascular system) through some organ or some mucous membrane.

On the whole, attention, much more than formerly, must be directed to repeated infection at different times of different organs, or even of the same organ. This explanation is especially applicable in cases of coexisting tuberculosis of the cervical nodes (+ tonsils), and in the intestine with the mesenteric nodes, as well as in coexisting slight tuberculosis of cervical and thoracic nodes or of thoracic and abdominal nodes.

The third mode is a successive extension from a single place to the neighbouring groups of lymph nodes, until a greater portion of the lymph node system of the body is the seat of a tuberculosis, which, while of different age, is of about uniform appearance.

This mode I consider particularly frequent and, therefore, will call special attention to it.

As long ago maintained by Weigert, I consider the communications between the lymph nodes of different regions as amply sufficient to explain such extension.

Observations in regard to extension of malignant tumors, especially carcinoma, and results of experiments on the transmission of tuberculosis to animals also confirm this. It is noteworthy that the infection generally seems to extend continuously, without leaps. It is another matter that we find the affection most marked in certain localities possessing numerous and large lymph nodes, e. g., the upper part of the neck, the bifurcation of the trachea, the hilus of the lung, the retroperitoneal connective tissue behind the stomach, about the pancreas, etc.

The results of the findings in the cases narrated and of considerations called forth by them warrant the following conclusions:

1. That primary tuberculosis of lymph nodes is quite frequent in adults.
2. That besides in the thorax tuberculosis is quite often primary in the abdomen and especially in the cervical nodes.
3. That not seldom it is found generally distributed, and
4. That it often extends from one place to another, during years or dozens of years, so that finally a great portion of the lymph node system has been attacked by tuberculosis.

The term latency is used so as to comprise both cases of well encapsulated old tuberculous foci (virulent or non-virulent), in lymph nodes and the not less important latent chronic affections of lymph nodes in which the tuberculosis has made its way from one place to another in the course of many years.

And I do not consider whether in these chronic affections of lymph nodes death is caused by complications brought about by them 2 or whether the affection remains latent the whole time and death is brought about by other causes.

It is worthy of note and clearly brought out by the clinical histories that the infection in these cases of chronic tuberculosis of lymph nodes often dates far back in childhood.

It has been shown in numerous clinical and pathological works (as the extensive work of C. Sternberg), that the course of lymphatic tuberculosis may take on various forms.

The localization to be considered next is primary tuberculosis of the intestine and the lymph nodes belonging to it.

In order to get a view of the frequency of tuberculosis of the digestive tract in general, I shall add the cases of primary tuberculosis of the faucial tonsils and cervical lymph nodes which have been discussed already in part.

The affection of the lymph nodes and intestine is the oldest; that of the lung was slight, looked more recent, and was completely encapsulated.

The affection of the lymph nodes must be looked upon as independent of that of the intestine (descending from the neck?).

To these 6 cases of primary tuberculosis of the intestinal tract must be added 2 which were not narrated, and 8 cases of primary tuberculosis of the abdominal nodes, mainly mesenteric and retroperitoneal (in 1 case the nodes in the groins and mesocolon).

In order to include all cases of primary infection through the digestive tract, however, it is necessary further to include the 3 cases of extensive lymph node disease already recorded, in which infection had occurred through the throat or intestine, or both; 6 of the cases of general infection where the throat was considered the place of invasion, and 5 cases in which was assumed a primary infection through the intestinal tract partly associated with infection through the respiratory tract.

It has been shown that in adults as well as in children perforation into the bronchi from tuberculous nodes may take place and set up a local pulmonary tuberculosis; further, that tuberculous nodes may become adherent to the lung tissue and thus infect it.

In these cases, as well as when the lung tissue is attacked by lymphogenous infection (from infected hilus or bronchial nodes, which is not of rare occurrence), **we are dealing with involvement of the lungs from neighbouring tuberculous organs, mainly lymph nodes.**

The lungs in all probability must be thought to be infected by way of the blood.

I must further emphasize that in adults, in addition to slight, **well limited, and apparently recent pulmonary tuberculosis, one also finds in other organs tuberculous changes which are extensive and plainly of older date; these are chiefly in the lymph nodes, but also elsewhere, as in bones, intestinal tract, genitalia, etc. It is therefore natural to suppose that in such cases the lungs have been secondarily infected by way of the blood (directly or indirectly) from the older tuberculous foci, for instance in the lymph nodes.**

This seems the more reasonable when at the same time scattered tubercles are found in other organs which must be due to hematogenous infection.

The given case one cannot exclude the possibility of 2 infections.

Tuberculosis in the Respiratory Tract

I have no doubt, that this proportion of 15% to 20% would be considerably increased if further careful investigations were made, especially clinically, with the view to establishing the previous existence of tuberculosis of lymph nodes, and not only of primary infection of the thoracic nodes but also, of what has been given too little attention, descending cervical or ascending abdominal lymph node tuberculosis. German works on lymph node tuberculosis show similar results.

As an instance I may mention the work of Blos on tuberculous lymphomas and their relation to pulmonary tuberculosis.

It treats of the children with tuberculous lymph nodes (cervical in 89%) treated in Czerny's clinic in Heidelberg.

Of 160 operated on at least three years previously, 26% had developed tuberculosis of the lungs and 14% tuberculosis of other organs.

Blos also compared similar observations from other surgical clinics.

These observations are substantiated by many of the cases described by me, and everything is strongly in favour of pulmonary tuberculosis being secondary (by hematogenous infection) in a not small proportion of cases.

As the result of these considerations: **I must maintain that also in adults pulmonary tuberculosis may be and often is secondary.**

The cause is then to be sought in tuberculous foci in other organs, but mainly in the lymph nodes, and **the infection of the lungs occurs most likely by way of the blood (from the thoracic nodes the infection might also easily occur through the lymphatics).**

I hope in the numerous cases recorded to have furnished anatomic support for such a view. With my observations in mind (including the latent bacilli in children), **I also believe I may maintain that much more stress must be laid upon primary infection through the digestive tract,** and not least on infection through the throat, than has been done formerly.

Clinical experience also points in the same direction." - in "Studies in the Frequency, Localization, and Modes of Dissemination of Tuberculosis, With Special Reference to its Occurrence in The Lymph Nodes and During Childhood", The Journal of Infectious Diseases, 1 March 1905.

A Note on Expectorants

"Squill is an Eliminative Expectorant.

Many of the true Expectorants are volatile and odorous in nature.

All excreted substances have to pass by an endosmotic process through a thin animal membrane.

And it is necessary before they can pass, that there should be on the other side of this membrane something which is capable of dissolving them.

Diuretics are soluble in water, and they pass through into a watery fluid.

But these Expectorants, whether they pass through the mucous glands, or immediately through the thin wall of the lung-cell, are brought directly into contact with air, and in this air these volatile matters are soluble, and are carried away by it.

This appears to be the reason why the Eliminatives which are volatile in nature tend particularly to act on the 2 aeriform secretions; i.e. on that of the air-cells of the lungs, and on the common cutaneous transpiration.

For though the glands of the mucous membrane of the lungs secrete mucus, yet the chief object of the terminal portion of that membrane is to absorb and secrete the gaseous matters of the blood.

The following are the chief volatile Expectorants, the odours of which have been clearly detected in the breath of persons to whom they have been administered:

Turpentine, Camphor, and the volatile oils of Onions, Fennel, Asafoetida, Cinnamon, and Anise.

These medicines, and others like them, are thus excreted by the air-cells or mucous glands of the pulmonary surface, and while thus passing through they stimulate the latter to a right performance of their function.

When, as in the case of Bronchitis, the secretion of mucus is increased in amount, or deteriorated into a purulent matter, they may be of service by causing the healthy secretion to replace the diseased one.

We find that the effete gases which should be excreted by the Bowels are sometimes voided by the Lungs in case of aggravated Dyspepsia (Indigestion), causing tainted breath. Just so may other adventitious elements of the blood, as these volatile medicines, be sometimes excreted by the pulmonary membrane.

But they may often pass off by the skin, or by the urine, and would not then act upon the lungs at all." - Dr Frederick William Headland, MD, in "On the Action of Medicines in the System", 1868.

The Treatment of Tuberculosis

"The organs of respiration will admit but one element safely: That element is Air. The epiglottis instinctively closes on any attempt to introduce a remedial agent in the form of a powder or liquid.

It is possible to impregnate atmospheric air with germicidal and antiseptic agents and thereby secure their introduction into the most remote recesses of the organs of respiration without effort or inconvenience on the part of the patient.

If every case of Tuberculosis could be brought under thorough germicidal and antiseptic treatment at the time of primary infection, no further treatment would be necessary, because the germ would be destroyed and the disease arrested **before the destructive pathological changes due to the germ and its secondary toxic property had undermined the nutrition and paralyzed the reactive power of the nerve centres. The primary action of the bacillus, like any other foreign body, is that of an irritant, with the usual histological changes: exudation of fibrin and leucocytes, epithelial proliferation, and inter-alveolar**

growth, but with the additional pathological element, sepsis, the result of the presence of a specific toxine, denominated by Vaughn, Bregier, Selmi and others, a ptomaine **(a putrefactive animal alkaloid) a knowledge of which elucidates many of the distressing symptoms of the disease, and is an infallible index to its progression or retrogression. We desire to direct particular attention to the salutary influence of the stimulating germicidal, antiseptic vapor on the ulceration consequent upon the tubercular process.**

Every physician will have noted the rapid decline of tuberculous patients where there was expectorated large quantities of purulent matter, evidence of extensive ulceration, and felt his inability to control the degenerative physical change.

By this method of treatment, the sputum changes in character from a heavy purulent to a muco-purulent and finally mucous character.

This result is attained through the combined influence of the local, and general antiseptic treatment.

By continuous application of the vapor to the surface of the ulcer the same results will be effected as by the application of a stimulating antiseptic to an external ulcer, namely, healthy granulation and cicatrization.

It should be remembered that the ulcerative process peculiar to this disease is of the chronic, indolent variety; hence the benefits derived from a stimulating antiseptic. By the employment of the means suggested under the above system certain clinical manifestations follow the administration of the germicidal and antiseptic vapor.

Within from 48 to 72 hours there will be improvement in the capillary circulation which is attributable to the stimulating effect on the vaso-motor nerves and strengthening the inhibitory nerves of the heart due to the neutralization of the ptomaines.

Night sweats, which have been cold and depressing, will become warm and exhilarating and, instead of the extremities, the head, neck and chest will sweat most freely.

Appetite begins to be restored, a relish for food appears and care must be exercised, in many cases to prevent the taking of more food into a stomach than can be properly digested.

In dealing with a disease of such gravity as Pulmonary Tuberculosis, too much reliance must not be placed upon aid from one direction alone.

Therefore it is best that we seek in the general domain of Materia Medica, Therapeutics and Hygiene for whatever may be of value.

All the necessary adjuncts to conduct the case to a successful issue should be faithfully, persistently and zealously employed.

The best possible Hygienic conditions should surround the patient.

Food of a Nutritious Quality; Bathing freely; moderate Exercise, Never to Weariness, all contribute their portion to success, and any one neglected may prove an obstacle to a favourable termination.

Especially in acute general Tuberculosis the vapor should be developed to its limit or the patient will perish from Toxæmia, a result, by the way, always occurring under any other method of treatment, the patient being overwhelmed by the rapid proliferation of the bacillus and the increased amount of its toxine.

It is a matter of common observation that most consumptives suffer, sooner or later, from a persistent, debilitating diarrhoea occasionally caused by indigestion, but more frequently by tubercular infection of the intestines.

The patient swallows bacilli laden sputum which, passing along the alimentary canal, finds in denuded mucus membrane a nidus adapted to its propagation, infection takes place and further proliferation follows.

No Tuberculous patient is wholly exempt from this exhausting and impoverishing complication.

We regard it wise, therefore to administer an antiseptic solution with a view to the sterilization of the alimentary canal against this insidious danger.

To accomplish this we administer an antiseptic solution in large quantities of water, not less than a quart in 24 hours, and preferably more.

In addition it is desirable that the Lower Bowel be thoroughly Flushed twice weekly to every other day, the Enemata being also sterilized with the antiseptic solution.

When the rapid disintegration of tissue, the consequent amount of effete products and engorged Emunctories are considered, an appreciation is gained of the necessity for a free and full solvent by aid of which to eliminate accumulated waste by flushing the sewers of the system.

As evidence of the value of this precaution, not a case of diarrhoea has developed among any of the patients treated after this plan." - in "Pulmonary Tuberculosis; A New Method of Treatment by Continuous Inhalations of Antiseptic and Germicidal Air", Journal of Medicine and Science, October 1899.

"A dirty sponge, when soaked well with water can be cleaned.

Without the soaking there will, and must remain in the interstices of the fabric whatever waste and foreign matter may have been introduced.

Fill the sponge with water and squeeze it; out comes the foreign matter. Continue this process, and after a time the sponge is clean.

The human body is a sponge with millions of interstices that may become receptacles for foreign matter. Some of the tissues of the human body are dense; the Brain, for instance, and the Nerve Structures generally, as well as the Joints and Tendinous and Ligamentous Structures.

From this class of dense tissues lodgments of foreign matter will be liberated and eliminated with more difficulty than from looser tissues, such as the muscular tissue, from which these lodgments may be delivered to the Emunctory System by ordinary Massage.

I am led to express this idea after reading the editorial in the "Interstate Medical Journal", 13 May 1913, in which comment is made on Dr William W. Graves's paper.

"Latent or dormant syphilis of the cord" simply means, that the spirochetes of long years ago have been harboured in the denser tissues and have not been dislodged by the free Emunction to be brought about by a systematic inhibition of water to flush effectively the 4 Emunctories:

1. Skin
2. Kidneys
3. Bowels
4. Lungs

We cannot flush sewers without water.

It makes little difference whether the Toxemia be post-typhoid, post-syphilitic, post-diphtheritic, or a Toxemia from absorption of toxines from the small or large intestine or from other sources.

There are but four channels of Emunction, and we cannot get free Emunction without water (approximately 75% of the normal weight of the body) in the system. Many of our patients are below the normal weight.

We must remember that food gives weight to the body, only when transported to its destination by the requisite amount of water to keep up the body weight.

Low weight, then, means an insufficient amount of water in the body.

Lack of resistance to disease means that the food taken has not been delivered to its destination with the proper amount of water. Unless there is an adequate circulating medium (the proximate principle, water), it will be difficult to furnish the body with nutriment and much more difficult to rid the same body of a Toxemia or the medication used in combating it.

Many of us observe unfavourable and often disastrous sequelae from the use of the formula familiar to us as "606", or of mercury, and many other potent remedies, but these valuable remedies with their havoc in the system, their unknown destruction and known destructive efforts, must be eliminated with the good work they have wrought, or else we have, or may have deposits of their detritus pent up in the remote and dense structures of important organs of the body.

The patient may be burdened with more waste, and more dangerous waste than the Toxemia itself might have caused.

The gist of this article is to ask for good elimination "pari passu".

Many cases of latent specific Neuroses may be thus avoided." - Dr J. C. Minor, MD, President of the Board of Health; Surgeon General, Arkansas National Guard, in "So-called Latent Syphilitics, or Paretics and Tabetics; a Water Suggestion", New York Medical Journal, 16 August 1913.

> *"The hours of sleep must be regulated, carousals of all kinds forbidden, and, while proper general employment of time is commended, excessive mental application and nerve-strain should be avoided.* ***This is particularly true in those of a neurotic type, in whom worry often induces a train of nervous and mental troubles. General outdoor recreations are beneficial. The teeth should be placed in good condition before the advent of the secondary symptoms,*** *and they should be regularly and properly brushed and the mouth kept clean.* ***Prepared salt water, sea water or sulphur baths, sponge and general, should be indulged in regularly. In fact all the Hygienic Methods which tend to maintain the Emunctory Systems; Kidneys, Gastrointestinal Tract and Skin, in the best possible condition should be advised, in order that the body may be able to repulse the inroads of the invading disease."*** *- in "The Hahnemannian Monthly", September 1900.*

"The effects of Over-use of Alcoholic Liquors upon the physical organization are dissimilar and the manifestation of over-stimulation of the vital powers are observed in different forms of pathological manifestations of the mental and physical disease conditions.

The pathological conditions of the body superinduced by the continued use of liquors are manifest in the different tissues of the body, in the Liver, Kidneys and the various Glands of the Emunctory System of the body.

The impairment of the nervous system of the body is apparent in a lessened power of concentration in mental action and a want of equilibrate mental co-ordination.

In a study of brilliant intellects it has been observed that power of intellect is weakened and mental force dissipated by the use of alcoholic liquors.

Some of the most brilliant intellects have seemed not to be impaired by the use of stimulants for a considerable length of time, yet a careful study of the work accomplished has demonstrated that there is want of cohesion and coordination in the results of mental efforts that clearly demonstrate that there is a lessened power of intellectual force.

The impairment of moral force in the cohesion of a continued course of moral conduct is always apparent in the lives of persons addicted to the use of alcohol.

There is nothing more forcibly demonstrated in living economy than the force of want of confidence on the part of the sober, industrious and honest in those persons known to indulge in the use of alcoholic liquors.

It is not of unusual occurrence to observe a want of confidence and distrust in persons of good moral standing which is ultimately traced to the secret use of liquor.

The power of observation has demonstrated that persons accustomed to the inordinate use of alcoholic liquors cannot be trusted, on the contrary, they are invariably unreliable." - in "New England Medical Monthly", April 1899.

"The organs composing the Emunctory System; the Liver, the Kidneys, the alimentary canal, the entire circle of the mucous membranes, and the skin with its millions of sudoriferous and sebaceous Glands and Ducts — constitute the machinery, — the channels — through the medium of which, the Syphilitic poison can be removed from the animal economy. Although the anatomical apparatus we have to work with is situated in different portions of the frame, and in structure possesses no special homogeneousness or resemblance in its several parts as above named, yet as a group, and in respect to function, they sustain a close affinity or relation; and fortunately, in a practical point of view, they can be brought to do good service either by the same remedial agents, varying in quantity and in modes of administration; or by different remedies so compounded as to per form a harmonious action, and leading to the same practical results.

And thus if a case of constitutional syphilis be cured, it is in this way that these Emunctory Forces, Inherent in the System, carry away, day by day, in Homoeopathic quantities, the poisonous element, until the last particle is exhausted, and the morbid process engendered by its presence is brought to its final rest." *- in "The Peninsular and Independent Medical Journal", September 1859.*

"That Inhalation is beneficial and curative must be admitted by all practitioners who have courage and honesty. That it has softened and soothed the path to the grave in those who were rendered incurable by neglect — that in incipient Consumption it has restored health and saved life — are facts which no pathologists will deny." *- in "Observations on the Efficacy of Medicated Inhalations in Pulmonary Consumption, &c..", 1854.*

"Pulmonary Consumption, in certain stages of the disease, is positively curable, and that under the most adverse circumstances it is possible to afford extraordinary alleviation of suffering by a judicious use of Medicated Inhalations." *- in "Pulmonary Consumption successfully treated by Medicated Inhalations", 1847.*

"You must aim to accomplish permanent amendment, and with this view must not be satisfied until you have rectified every disordered function. I cannot explain its remarkable efficacy (Medicated Inhalation) but it is a remedy of real value." — *Theophiics Thompson, Physician to the Loudon Hospital for Consumption and Diseases of the Chest, author of "Clinical Lectures on Consumption", &c., 1855.*

Chapter 19

Concerning Immunity

“One of the most interesting of practical biologic questions is that of immunity, natural and acquired. Any such protection against disease as exists must be looked on as relative and not absolute, and **Dependent on the Concurrence of a Variety of Factors. Immunity has been variously thought to be due to the presence in the blood and bodily fluids of agencies, partly chemical, partly cellular, antagonistic to the micro-organisms or to their toxic products.**

With the view of reaching a satisfactory explanation of certain obscure points, Baumgarten (Berliner Klin. Woch., 9 October 1899), and his pupils have for some time devoted themselves to a study of this aspect of the subject.

It was found, among other things, that the same inhibitory influence was exerted on Bacteria by such agents as physiologic salt solution, and other saline solutions, the salts dialyzed from blood into water, water itself, and solutions of gelatin and nutrient bouillon, as by blood-serum.

This result is attributed to the change in the environments of the micro-organisms, and the necessity for adaptation to their new conditions.

It was found further that blood-serum failed to affect bacteria dried on silk threads. **The most important influence, was found to consist in a disturbance in the assimilative processes on the one hand, and of osmosis on the other.**

Different Bacteria Require Different Nutrient Material for their Satisfactory Development, and some even thrive on blood-serum. This fact will suffice to explain why some bacteria fail to develop in certain media.

Another phenomenon observed in Bacteria exposed to the action of blood-serum consists in contraction of the protoplasm, separation from its cell-membrane, and disintegration into small spherical segments.

This process is known as **Plasmolysis**. It could not be induced by exposure of the bacteria to the action of true enzymes. While not directly destructive to the bacteria, **Plasmolysis (the process in which cells lose water) is believed to be an important factor in the inhibition of their activity and vitality.**

Bacteria that have undergone this change are probably exceedingly susceptible to all external influence, such as change of medium. Too sudden disappearance of Plasmolysis, further, has an injurious effect on the bacteria, which then fail to develop; even rupture may take place. Such influences, it is conceived, must be operative when the bacteria are transferred from serum in which they have undergone plasmolysis to liquefied gelatin, or to hot viscid agar.

It was found that Plasmolysis disappeared more quickly under favourable nutritive conditions than with a deficiency of nutrient material. Natural Immunity is thought to depend on failure on the part of the bacteria to find in the immune body a suitable culture-medium, that is, the chemical conditions necessary for their existence and development.” - in “JAMA”, 18 November 1899.

Auto-Infection as A Factor in Disease

"A few years ago, while on a vacation trip in Colorado, I had a run of Typhoid Fever, which at the end of 3 weeks, at the beginning of convalescence, gave rise to coma and convulsions, presumably of uræmic origin.

According to the statement of my physician, the urine at the time was scanty and somewhat albuminous, there was no tympany of bowels, and regular alvine movements had taken place up to a few days preceding the development of coma.

Like a wise man, my physician , when summoned to my relief went to his books for further help, and found, fortunately for me, in a copy of Hale's Practice, a single line suggesting that in so-called uræmic convulsions it might be well to employ intestinal evacuants.

The idea was immediately put into action, the bowels were promptly cleansed by colon flushing, and internal antiseptics were given by the mouth, with the result that at that last almost hopeless hour my life was saved by thus instituting antisepsis in a septic bowel.

I present in this paper very much that is original beyond a few statements of clinical experience and observation that seem to my mind confirmatory of the doctrine of the chemical pathologist, from whom we have obtained most of our data, and to whom we must still look for further development in this important field of investigation, as much of this knowledge can only be had by chemical investigation, and by the study of the toxic properties of the urine and excreta of the body.

While, as stated, I have made little original investigation beyond recording some clinical data, I have at least earnestly attempted to present a few such facts, together with such others as have been gleaned in the literature of the subject, thus giving what seems to me to be about the gist of the matter, whether demonstrable or not, but important at least as bearing upon questions which concern the lives of our patients, and especially of importance as having to do with the origin of disease, which makes the subject one of everyday interest to the medical practitioner. **Many of the facts established cannot longer be ignored.**

Putrefactive processes in the intestinal canal and the development of physiological and pathological alkaloids play an important part in many diseased states until lately little known or understood.

In my own case, I am convinced that uræmic poisoning, the products of intestinal putrefaction, which the liver should have disposed of, were thrown back into the circulation, embarrassing the kidneys in their effort to eliminate, with coma and convulsions as the sequel of their failure to accomplish the renal function.

It has been pretty well proven that urea is in itself a diuretic; that it is barely more toxic than distilled water, and is more of a "bugbear" to doctors than aught else; **that so-called cases of uræmic poisoning are not produced by urea alone,**

but by a combination of all the poisons which render urine toxic; or, in other words, the poisons which should be eliminated by the renal path and are prevented from being so cast off by inadequacy of the kidneys alone.

To quote Bouchard:

> ***"The question of uræmia can only be argued from accidents happening at a time when the kidneys no longer eliminate in a stated period the Toxic Products introduced into the system or formed by it during this period.***
> ***Then we may see a series of paroxysmal nervous accidents happen, characterized by pain in the head, dyspnoea of the Cheyne-Stokes type, vomiting, diarrhoea, convulsions and coma.***
> *There may also be oedemas and alterations of temperature.*
> *Again, there exists a form of so-called uræmia characterized by early dropsies of the external surfaces of the body, general or localized. Such an oedema may increase, the urine diminish in quantity but increase in density, the kidneys excreting solids near to the normal, but not the fluids. The patient, perhaps, has neither vomiting nor diarrhoea nor any flux capable of carrying away water.*
> *There is simply retention of water in the organism-hydræmic plethora.*
> *Here, as long as the urine continues to carry away the total quantity of solids that should be eliminated in a given period, it would be impossible to explain by the theory of intoxication the accidents that might arise."*

Can any proof be furnished that uræmia does exist?

Uræmic patients are those whose urine has lost its toxicity.

The whole of the urine for 24 hours from an uræmic patient cannot kill a rabbit when used as an intravenous injection.

Urea injected into the system is only slightly poisonous; it would require the quantity generated in the organism in 16 days to kill a man, but in double-calculus obstructions, suddenly developed, uræmic accidents appear sometimes at the end of the 2nd day or early in the 3rd.

I saw a puerperal woman who, upon the 12 day of the lying-in time, was seized by Intense Pain in the head, first frontal, then occipital, and on the following day Difficulty of Speech and Coma supervened.

My first visit to the case was about 36 hours after the coma began.

She had an elevated temperature but a cold external surface, muscular twitchings, asymmetry of pupils, slow pulse and Cheyne-Stokes respiration.

The history was that of a fourth confinement, with instrumental delivery and an uneventful lying-in period. I removed 350 ml of urine from the bladder at my first visit and 200 or 240 ml every 6 hours for the next 48 hours, and some was voided incontinently, particularly during the 12 hours preceding her demise.

The specific gravity was 1019 to 1021, reaction alkaline, pus and bacteria from the bladder, little albumin and no kidney-casts.

She had the history of some cystitis, not painful but frequent urination for a week following confinement.

The muscular twitchings ceased in about 24 hours after the case came under my observation, breathing became more regular, pulse fell below the normal, and temperature abated to near the normal.

She showed a tendency towards consciousness, as evinced by attempts to fondle the baby when put to her breast.

Death came suddenly, about 60 hours after I had the case, as if by instant paralysis of the heart and lungs.

The case was believed to be one of Uræmic Poisoning.

I have little doubt but that a toxic product developed somewhere in the body, and attacked the brain or its membranes with such virulence as to cause the cerebral edema which I believe was the immediate cause of her death.

Whether bacterial or alkaloidal, I cannot say, but with kidneys eliminating up to the normal in solids and fluids, it could not have been uræmic.

Before attempting to discuss the nature of toxic substances produced in the body, we may appropriately refer to their sources, which are chiefly through disassimilation, the secretions of the Liver, Alimentary and Intestinal Putrefaction.

Now, is it possible to act upon any of these sources of intoxication of the system so as to exhaust or diminish them?

It may be stated, in a general way, that man escapes intoxication by the aid of intestinal, cutaneous, pulmonary and renal Emunctories.

The functions of the Liver and Kidney are of the greatest importance.

In the first place, the liver protects man by arresting on their way, before they pass into the general circulation, the poisons brought from the intestine by the portal vein, in order to neutralize them, or to throw them back into the intestine. But the most important Emunctory is the renal.

It can eliminate all poisons generated in the body, save gas alone.

By the lungs are eliminated carbonic acid, water, ammonia, often volatile and fatty acids, which explains the fetid breath of people, the subjects of constipation and hypochondriasis. By the skin, water, carbonic acid and volatile fatty acids are eliminated.

In uræmic states the attempt is often made to get the skin to eliminate vicariously.

The perspiration will carry away 1,500 gramme only of urea with every 1,000 of water, while the same amount of the urine would carry 10 times as much urea from the system. We rather lose, therefore, than gain by this process, since perspiration diminishes still further the amount of urine, which alone can carry out of the system most of its toxic products.

I have noticed that when copious perspirations have been induced by pilocarpine the general condition is not improved.

It is true that perspirations may help to eliminate poisonous products to some extent, but the true depuration of the system is accomplished chiefly through the kidneys. It is the kidneys that enable the body to be thoroughly cleansed.

This is effected by increasing the renal secretions by diuresis, and by the use of cold drinks and cold bathing. It is noticeable in typhoid fever that when the urine increases there is always improvement in the general condition.

It has been pretty well established that the skin and lungs cannot vicariously aid the kidneys when they have become incapable of eliminating.

The secretions of the stomach and intestine have no elective action upon urea.

Water removed from the tissues, or from the blood by drastic purgatives, contains only one-fiftieth of the quantity of urea contained in urine.

Therefore, this quantity of urates eliminated as urine could have removed 50 times more urea by the renal route.

What can be done to delay dis-assimilation, to lessen production of toxic material in the blood and tissues?

Those things which are especially toxic are the products of life without oxygen.

It is therefore rational to adopt the practice of Jaccoud, who speaks highly of the inhalations of oxygen in uræmia.

Increase the free oxygen and you will moderately increase dis-assimilation; but the products of this dis-assimilation will be much less toxic.

Exposure in fresh air, is said to lessen by one-half the toxicity of urine.

Along the therapeutical line other than the indicated remedy may be mentioned foods, such as milk.

There is a source of poison resident in the biliary secretions.

We can in a measure govern these secretions.

The poisonous principle in bile is principally its pigment or coloring-matter, bilirubin.

When milk is perfectly digested Constipation is established, and the dry and hard faecal residue which it leaves contains almost no biliary pigment.

When it is not digested, and does not absorb bile-pigment, milk purges and increases the secretion of bile.

Since it is known that decolorized bile is less toxic, any agent that absorbs its pigment has therapeutic value. That charcoal in sufficient quantities has this property has been fully demonstrated.

Further, this agent opposes intestinal putrefaction and is an aid to intestinal asepsis. **An agent capable of producing ideal intestinal asepsis must be one that renders the faeces odorless and is excreted with them; in other words, one that is not absorbable, and produces no toxic symptoms in the system, either by its own chemical action or by splitting up and forming dangerous compounds with other toxic principles in the system.**

A very important indication is to prevent Auto-Infection by the products of intestinal putrefaction. Only a small quantity of putrescible material should be admitted into the intestinal canal, so that the digestive residue may form solid masses to present to the absorbing mucous surfaces.

Milk food, when well tolerated, produces this desirable result-that is to say, faecal matter scanty and solid.

Thus, from whatever way we may regard it, milk is opposed to all sources of Intoxication.

Uraemic symptoms have disappeared when complete intestinal asepsis was once thoroughly established.

Aside from the specific treatment, diuretics, milk as food, intravenous injections of normal saline solutions, with inhalations of oxygen, seem to be the line of treatment which experience has confirmed.

It is also the treatment which arises naturally from such a conception of the disease as I should like to see more fully presented here.

While the subject of Auto-Infection is not a new one, the study of the poisoning of the system by the products of its own tissue metamorphosis has certainly assumed an entirely new aspect in very recent years, through the combined work of different investigators.

Modern pathology has paid close attention to the intermediate product of tissue changes, **and enables us, to have a better understanding of the pathogenesis of quite a number of various morbid states and conditions.**

Those Intermediary Products:

1. Kreatin.
2. Cystin.
3. Oxalic Acid.
4. Lactic Acid.
5. Ammonia.

And others normally produced in very small quantities only, may in cases of disordered tissue metamorphosis be produced in very large quantities and give rise to a variety of morbid symptoms.

Here we have certain normal elements becoming poisons by excess.

What is generally termed a dyscrasia, through heredity or acquisition, but which would be better called defective nutrition, is a very common cause of chronic disease by Auto-Intoxication.

Of course this class precludes **those affections which arise through external causes that provoke nerve-action, reflex action, or cellular disturbance, or those in which the tissues are diseased by infection by parasites or their products, although all of these causes may act in a secondary manner by intoxication.**

When nutrition is lessened we frequently observe nervous disturbance, such as apathy, dejection, inaptitude for work, headache; and we generally note in the renal, cutaneous or pulmonary excretions some incompletely-oxidized product, and there are good reasons for arguing that **these products are the probable cause of the nervous symptoms.**

If the lowered or depraved nutrition is the cause of nerve-enervation or otherwise, or is the cause of a large share of the poisons, simple or complex, that are produced in the organism and which lead on to disease, we should naturally be led to the study of the functions and the disorders of the Intestinal Tract as a primary cause.

My observation and study incline me to think that when we attempt to consider the stomach and its associated intestinal, and hepatic affections we have a large job on our hands.

Bouchard shows that, taking ten patients at large in a hospital, we will find 3 of this number with dilatation of the stomach.

Now, what does this mean?

Why has dilatation been so little known, if so frequent?

> *"Principally, it is stated, because it cannot be recognized save by establishing its physical signs; but often, on examination of the patient, the symptoms of which he complains are not of the nature to lead us to look for it or to suggest a local examination." - Bouchard*

> *"People whose stomachs are dilated become ill slowly, as a rule; they are the victims of insufficient alimentation because the alimentary material, incompletely digested and undergoing putrid fermentation, is no longer sufficient for their nutrition; they are chlorotic, hypochondriacal, and without energy; the appetite is in general preserved, and often augmented; often those who are subjects of dilatation eat largely and suffer no pain, but at the end of 2, 3 or 4 hours the stomach is blown out, eructations are produced, pyrosis, regurgitations, acidity - all of which demonstrate the anomalous fermentation which is going on in the stomach, due probably to the formation of acetic acid, and in consequence of which the entire length of the digestive tube is more or less inflamed." - Chomell*

There is catarrh of stomach, ulceration, gastritis; the large bowel is irritated, and with the fæces are seen glairy mucus and sometimes blood.

Besides the Gastro-Intestinal dyspepsia there may exist hepatic congestion, hepatic tenderness, and often jaundice.

To the enlarged stomach with the frequently-recurring hepatic fulness has been attributed the floating right kidney so often found associated with these symptoms; and its greater frequency in women is, due, in a measure, to the additional pressure of the corset at the base of the thorax. I now have a patient with floating right kidney, whom I have several times attended during these attacks of hepatic congestion-so-called "bilious attacks" - when the "lump in the side" became troublesome, but was never of much trouble at other times.

There are many symptoms, in these cases of stomach enlargement, on the side of general nutrition and disturbances of the Emunctories.

They are:

Chilly, but perspire freely upon slight exertion, often the
Perspirations are of a Musty Odour; they have
Eczemas,
Pityriasis in Front of Sternum,
Urticaria,
Acne,
Bad Breath,
Take Cold Easily,
Cough,
The Bronchi secrete Mucus, and there may be
Asthmatic Breathing.

One symptom noted by Bouchard I have several times seen – nodosities at the level of the second articulation of the fingers. He says that when you find this, it is nearly always accompanied by dilatation of the stomach, due, probably, to general perversion of nutrition, but pathognomonic, quite of the affection. In rachitic infants we have similar nodosities, due to the primary disease of the stomach.

Different groupings of symptoms are noticeable:

- There is a group simulating Biliary Lithiasis.
- **Pseudo-gastralgic pains, which are really gastralgia, show themselves slowly when intestinal digestion begins, owing to deficiency of hydrochloric acid or excess of acetic acid, which irritates the mucosa of the intestinal tract.**
- **The Neurosal type, with vertigo, depression in the morning, spasms of fingers, spinal irritations, cerebro-cardiac neurosis, hypochondriasis.**
- **The Cardiac Form, with palpitations, breathlessness, beating in the temples, redness of the face, cardiac oppression, symptoms of vasomotor disturbances.**
- **The Renal Form, with albuminuria, without cardiac hypertrophy or kidney lesion.**
- **The Rheumatoid Type, with its joint manifestation, or perhaps phlebitis, and the acute or chronic consumptive type, where the patient has suffered with his stomach for many years, and finally becomes exhausted and hypochondriacal.**
- **Putrefaction of the alimentary residue develops poisons,** and while the liver, which receives these poisons as they are absorbed and brought to it by the portal vein, is generally able to neutralize or return them again to the bowel to be excreted, this organ, by its own secretions, may become a source of Auto-Infection. Bile is very abundant, almost equal in quantity to the urine, and is a diffusible liquid, passing by osmosis into the blood.

Man forms in 8 hours enough poison to kill himself by his hepatic secretions, and, the quantity being nearly equal, the toxic properties of bile is 9 times as great as that of urine.

The blood, however, is able to reject most of this poison, as we observe, in sudden occlusion of the bile-duct from gallstone, usually 24 hours will pass before the icteric hue of the skin is noticeable.

The urine is colored more quickly, and it is presumable that the tissues-cellular, fibrous and muscular are first impregnated.

Experience shows that the kidneys are constantly eliminating and the connective- tissue acting as a storage-reservoir of poison which the blood reabsorbs only gradually.

That these tissues, which occupy the lowest rank among anatomical elements, protect man by drawing from the blood the coloring-matter of the bile, which is its most toxic principle, seems to be well established.

The greatest danger in jaundice therefore, is a kidney which fails to eliminate.

On the other hand, with a healthy kidney, jaundice is curable.

The true protecting agent of the system is the kidney, which fact should never be lost sight of in all cases of systemic poisoning; and so it may be said that the healthy man is both a receptacle and a laboratory of poisons.

He receives them in his food, he creates them by disassimilation, and he forms them in his secretions, and yet he is defended in various ways against poisoning.

His liver protects him by arresting on their way, before they pass into the general circulation, the poisons brought from the intestines by the portal vein, in order to neutralize them or pour them back into the bowel.

Then the excretory system expels the poisons which are in the circulation.

The most common condition in which we find intoxication occurring is, through the alimentary canal. It is by provoking gastric fermentation through error of diet, by excessive intestinal fermentation, by preparing poisons, and especially acetic acid or excess of hydrochloric acid, that dilatation of the stomach vitiates the nutrition of many of the tissues and organs of the body.

The bile is poisonous chiefly by its pigment, bilirubin.

The system is saved from this source of poisoning mainly by the kidneys and connective tissue, cellular and fibrous, the white fibres holding the colouring-matter, which, if allowed to remain in the circulation, would seriously affect the nerve-cells. As **a case illustrating chronic Auto-Infection** I may mention that of a lady 60 years of age, who for 12 years or so has been under my care.

During much of this time she has been compelled to restrict her dietary to a few articles of food, mainly nitrogenous, with cereals and stale bread.

She was the subject of **slow digestion, bulimia (binge eating: eating large quantities of food in a short period of time), furred and cracked tongue, foul breath, Headache, Muscular Debility and obstinate Constipation, with Hypochondriasis (illness anxiety).**

She was debilitated, and her complexion sallow and muddy.

About 4 months ago she had complete stoppage of the bowels, the cause of which was found, through the lax abdominal walls, to be at the sigmoid.

A laparotomy was made, and a large adeno-sarcoma, embracing and constricting the lumen of bowels, was removed from the abdomen, first by exclusion, and after 36 hours, when pretty fair adhesion of the gut to the abdominal walls were secured, the mass was excised.

She made an uneventful recovery; and, although the bowel has not been reunited, she digests her food as she has not in many years.

She eats almost everything, is in excellent spirits, has gained 7 kilos of flesh, and in place of the sallow and tawny complexion, she is getting a red-and-white complexion, and says she is so happy in her present state that **she does not wish to have the bowel united for fear of being obliged to return to her former condition.**

While the tumour microscopically is a cancer, constitutionally I believe it is not; there seem to be no invasion of the lymph-channels nor secondary deposits, and I attribute her improved health not so much to the removal of malignant, diseased tissue, as to the opening up of a channel whereby putrescence and putrefaction of food; products are eliminated.

It is interesting, in this case, to note that she has the Enlarged Second-Joint Articulation of the Fingers." - Dr J. W. Coolidge, MD, in **"Auto-Infection as a Factor in Disease"**, Transactions of the 33 Annual Session of the Homeopathic Medical Society of the State of Pennsylvania, 1898.

Please See: Chapter 15; "The Teeth As A Foci of Infection"

Treatment & Cure of Typhoid Fever

"In a recent case of **Typhoid Fever** I took charge on the 5th day.

The administration of Acetozone was begun on the 10th day.

The diagnosis was confirmed by a blood test made by an expert bacteriologist in New York.

Internal antisepsis - the thing most to be desired in Typhoid Fever - was, the speedy and permanent result of the administration of Acetozone in this case.

Evidently there was increased elimination of toxins by the kidneys.

The stools, which had been frequent and offensive during the early stage of the disease, became less, and almost odourless, and the quantity of urine increased from 40 to 120 ounces, per diem.

Delirium and other unfavourable symptoms disappeared." - Dr J.W. Coolidge, MD, in "A New Method of Treating Typhoid Fever", Therapeutic Notes, October 1903.

Chapter 20

On the Functions of the Skin in Relation to Life, Health and Disease

> ***The common law of health is the Christian Law: "Thou shalt love thy neighbour as thyself." All that we need aim to secure is purity, air, cleanliness in the house, the air and the water, and genuineness in the food and clothes. In fact a great part of Sanitary Science can be comprised in that one Word: Cleanliness. No Epidemic Can Resist Clean Houses, Clean Air, and Clean Water."*** *- Dr Lyon Playfair, MD, in "Subjects of Social Welfare", 1889.*

"It may appear somewhat superfluous in the present state of civilization to seek to impress the public mind with the advantages of bathing.

But while admitting the improvements in cleanliness that have taken place during the last 25 or 30 years, particularly amongst the middle classes, it will not be denied there is still room for further enlightenment, especially when we consider that there exists a large amount of absolutely forced uncleanliness amongst the working classes, not only in the metropolis, but in many of the towns and cities of the United Kingdom.

Whatever obstacles there may be in the way of improving the condition of the lower orders who form an important part of the community, and (assuredly no permanent good can be effected without acting upon their physical surroundings), we must admit that there exists little real difficulty in supplying them with **adequate Baths and Washhouses**, and even were the difficulties as formidable as they are insignificant they ought not to be allowed to stand in the way of the important end in view, viz., the physical and moral elevation of the people.

In the 19th century it ought to be unnecessary to introduce remarks on the skin, but the want of public knowledge on the importance of keeping it clean in order to maintain the bodily health, has urged me to do so.

I am sorry to say there are but few, even of the educated public, who **have that practical knowledge of the physiological action of the skin, which is necessary to an appreciation of the value of Bathing, for the maintenance of a healthy condition of the animal economy.**

The skin, is a delicate integument, which envelops and protects the wonderful and complex organism of our physical frame, and in an adult it has an extent equivalent to about 15 square feet, or 2160 square inches. Though to the eye it appears to be a single and somewhat simple tissue, it really consists of 3 layers, differing very materially in structure.

The internal layer is the cutis or skin proper, which is plentifully supplied with blood-vessels, nerves, and absorbents, and is consequently very sensitive.

The external layer is the epidermis or cuticle, or the scarf-skin, as it is commonly called. **It is a thin elastic, albuminous membrane, and, being destitute of blood-vessels and nerves, is comparatively devoid of sensibility.**

Between the skin proper and the cuticle is the rete mucosum, an indistinct layer, unless, as in the black African, it becomes the seat of the pigment from which his colour is obtained.

The surface of the skin is studded over with an amazing number of minute pores, forming the mouths or openings of the canals or ducts of the sudoriparous glands and sebaceous follicles, situated in or below the skin.

These little glandular organs are continually secreting and excreting, the one a watery, and the other an oily fluid, which lubricate the surface and impart pliancy and softness to the skin. The openings of the canals may be readily seen, and their number estimated by a simple microscope on the points of the fingers.

By means of a powerful lens, Erasmus Wilson, was enabled to count the number of pores in a square inch of bodily surface, and hence to estimate, with a close approach to accuracy, the total number of pores in the whole body of an average sized person. He found these to be not less than 7 millions, and as each pore represents a little tube 0.635 centimetres long, it follows that the length of excretory tubes in the skin is little short of 45 kilometres. Now the greater portion of the blood flows through the vascular network of the true skin; and it is important to bear in mind this extreme vascularity, as we generally find organs supplied with blood in proportion to their importance in the animal economy.

The Function of the Skin is 3 Fold:

1. **Absorptive.**
2. **Secretive.**
3. **Excretive.**

It is also the Seat of the Sense of Touch.

Absorption Function of the Skin

The Absorptive Function of the Skin is illustrated by the rapidity with which water is frequently absorbed when the body, under certain conditions, is entirely or partially immersed.

Experimenters have often found that if the body, after long fasting, or exhaustion by severe or protracted labour, is plunged into a warm bath and kept there for half an hour, a marked increase of weight ensues.

This function of the skin is, perhaps, more clearly shown by the endermatic method of administering medicines.

Medical men are well aware that many medicaments, **when applied to, and especially when rubbed into, the skin, produce their known effects as rapidly and completely as when introduced into the stomach or directly into the blood.**

Secretive

Secretions: Sudoriferous glands secret sweat, which is also called "perspiration."

Apocrine glands secret a sticky viscous secretion while the secretion from eccrine glands is thinner; watery by comparison.

The main functions of the secretion of sweat are to help regulate body temperature and to help eliminate from the body some of the waste products of metabolism (i.e. metabolic reactions).

Excreting Abilities of the Skin

As an excreting organ the skin is of great importance.

It is estimated that about 20% of the whole excrementitious matter of our bodies is exuded through the skin.

Its primary office is to separate from the blood the effete hydrogen in the form of its superabundant watery particles.

It has, however, many important secondary offices.

The chief cutaneous excretion, the perspiration is of 2 kinds:

1. Sensible perspiration: which is a fluid occasionally excreted, as after severe exercise;

2. Insensible perspiration: or transpiration, an invisible vapour which is continually being given off by the skin.

The sweat, or sensible perspiration, is essentially an aqueous fluid, but it holds in solution a very great variety of substances.

Its taste is saltish, and its reaction acid.

Chloride of sodium (common salt); salts of ammonia; the salts of the organic acids; butyric, formic, acetic, lactic, and carbonic-acids; earthy phosphates; peroxide of iron; pigmentary, fatty, and proteine matter, and nitrogen, are always found in it. Various estimates have been made of the quantity of matter exhaled, in the form of perspiration, from the surface of the skin of the adult human body in 24 hours. These have ranged from 20 to 40 ounces, and, perhaps, 30 might safely be taken as a fair average. Seguen found from experiments the amount to be 15,840 grains, or about 33 ounces. According to the carefully-conducted experiments of Anselmino, the sweat contains, on an average, .088%, of solid matter, 100 grains of which gave 22-9 grains of saline matter: these calculations give for the 24 hours, 107.47 grains of organic matter, and 81.92 grains of saline matter. These are the principal substances thrown off by the skin when in a healthy condition. In various diseased conditions of the organism, however, the skin becomes the medium of discharge from the body of poisonous substances, either producing or resulting from disease.

Mental Complaints

For Instance: Carbonate of Ammonia, and Uric Acid have been discovered in the perspiration in a Variety of Diseases, especially Mental Complaints.

In such cases the skin usually assumes, in addition to its own proper offices, a compensatory function, in consequence of the diminished activity of, and secretion from, internal organs.

Excretion is an all-important depurating or purifying process; if the worn-out tissues of the body are not duly removed from the blood and discharged from the system, they rapidly accumulate and act as the deadliest poisons; and the worst consequences to health and life often result.

There Is No Greater and More just Cause of Alarm to the physician than the Cessation or Suspension of customary Discharges from the Various Excretory Glands and Canals:

1. Should the Renal Secretions be Suppressed, Uraemic Poisoning and Death from the Accumulation of Urea in the Blood is the Result.

2. Should the Biliary Function be Suspended, bile accumulates in the blood, and insensibility and Death as Inevitably Follow.

3. Should Respiration be interfered with, the effete carbon is retained in the system, arterial blood becomes venous, the Brain is Poisoned, and then the action of the Heart Stops.

But it often happens that a function is temporarily suspended, the functional activity of an organ diminished or arrested, while its duties are undertaken by another organ until it has recovered tone and energy.

This increased activity, this augmentation of duties, on the one hand, is imperatively necessary to neutralize the lessened energy of the suspended function, on the other; otherwise **the balance of the different functions, on whose integrity health depends, would be lost, and permanent disease, speedily terminating in death, would result.**

Now the skin often partially or wholly relieves the lungs, kidneys, intestines, and other internal excreting organs, of their important duties. In disease of the kidneys, for instance, the skin sometimes eliminates in the form of carbonate of ammonia, the urea which accumulates in the blood and would otherwise act as a deadly poison. The functions of the skin and the kidneys stand in so close a relationship, that they often assume the place, to a great extent, of each other, so that when the skin is impaired, the kidneys increase in activity, and vice versa. It is in this way that the balance necessary to life is maintained; but this compensatory action is limited, so that the one organ cannot wholly, or permanently, or, indeed, for any length of time, supply the place of the other.

The most casual observer will have noticed that, in hot weather, when the skin is active, the quantity of perspiratory matter thrown from the system is increased, and the quantity of urine passed is diminished, while in cold weather this is reversed.

It is a too common occurrence, when scarlatina (scarlet fever) is treated without a proper attention to, and the regulation of, the functions of the skin, as is the case with "old physic," that a sequel sometimes extremely difficult to deal with supervenes, namely, dropsy.

Scarlatina (scarlet fever), being an eruptive disease of the skin, obstructs the escape of the perspiration, and causes the fluid to accumulate in the system.

The kidneys will for a time succeed in relieving the patient.

But if the skin is not speedily restored to its normal action, dropsy is inevitable.

In case of disease of the renal functions the skin relieves the kidneys of their duties, which is witnessed by the fact that the fluid eliminated contains some of the substances common to urine.

A marked functional sympathy also exists between the skin and the intestines, which is best illustrated by the effects of unhealthy or diseased state of the one upon the other; hence the tendency to diarrhoea from cold feet on the one hand, and the connection between cutaneous eruptions and intestinal irregularities on the other.

These brief illustrations might be almost indefinitely extended; but they are sufficient to show the important relation existing between skin and the internal organs.

When the removal of effete watery matter from the blood is stopped, the labour of elimination is added to the ordinary duties of the internal organs.

Were this vicarious action of but short duration, no permanent mischief would probably accrue.

But all the organs of the body are liable to become exhausted by overexertion, if long continued; and this exhaustion if not remedied, will sow the seeds of, if not terminate in, disease.

If the functions of the skin are long suspended, either partially or entirely, not only are the lungs likely to become diseased, but almost all the internal viscera will suffer sooner or later.

It is of the greatest importance that the integrity of the skin should be preserved in order to resist cold, and however paradoxical it may appear, it is also capable of generating cold. The human body has a fixed temperature, beyond which it cannot be raised by external heat; when therefore the external heat exceeds that of the body, this is compensated by increased perspiration which is converted into invisible aqueous vapour, and is essentially a cooling process.

This is the reason why the human body has been found capable of resisting artificial temperatures greatly higher than boiling water hence in summer, in tropical climates, or artificial high temperatures, perspiration ought to he encouraged and not checked.

Erasmus Wilson, in his work on the skin, instances the fact that Sir Charles Blagden supported a temperature of 127 C. for nearly 10 minutes.

The furnace in which Sir Francis Chantry was in the habit of drying his moulds was heated to a temperature of 177° C., and into this his men occasionally entered without inconvenience.

The oven used by Chabert during his exhibitions in London was heated to between 4,008 and 6,008.

Such, then, **is the wonderful System of Cutaneous Drainage which nature has provided to eliminate from the body Impurities that otherwise would not only Derange Health but Destroy Life.**

The skin is also a medium for the reception of impressions on the nerves, its whole surface being one vast network of those mysterious organs; which explains the intimate relationship and dependence existing between healthy skin action and Mental Equilibrium.

From these considerations it must be patent to everyone how supremely important it is that the skin should be kept clean, in order to preserve its normal action. The human frame is admirably adapted by the laws of its being for the realization of happiness, yet we find daily it is an unfailing source of pain and discontent to multitudes, a state antagonistic to the benign intentions of our Creator, and the result of transgressing those laws by virtue of which "we live and move and have our being."

Health essentially depends upon obeying certain conditions which experience teaches us it is impossible to violate, or even modify, without incurring suffering. We may conclude also that according to the extent of our transgressions so will be the intensity of our sufferings.

Physically, we live under a stern mandate — Obey and live! disobey and die!

Disease and consequent suffering everywhere presented to our view are but the reflex of our own actions.

Our acquaintance with life and its conditions, even today, is so imperfect that we can do little more than say with the Psalmist:

We are **"will praise thee; for I am fearfully and wonderfully made: marvellous are thy works; and that my soul knoweth right well."** - Psalm 139:14, yet our knowledge is sufficient to guard us from blasphemously attributing the sufferings of mankind to the will of God.

The sentence pronounced upon Adam:

"In the sweat of thy face shalt thou eat bread" - Genesis 3.19, misrepresented as a curse, is but the assertion of a law which we can only neglect or disregard under penalty of bringing upon ourselves painful consequences.

Did we but follow this primaeval teaching, and live and work in the open air, with our bodies so clothed as to allow the skin literally "to breathe," a healthy balance of the functions would be maintained, and disease would become, comparatively speaking, rare.

But **our so-called Civilization imposes such restraints upon us, obliges us to follow such unnatural callings, and withal environs us with surroundings so opposed to health,** that our existence must be taken as the strongest possible evidence of the aboriginal strength of the race.

Upon no organ do the present unnatural modes of living produce more certain effect than the skin. The man who follows an employment entailing great physical exertion in the open air is rarely a diseased man. **His labour excites the skin, and what would otherwise become poisonous and productive of disease is eliminated from the system.**

As an evidence of this — his shirt, worn, as is the usual custom, for a week, smells abominably; but if the man's shirt is dirtier than that of his employer, who performs no physical labour, his body is so much the cleaner — his health immeasurably better, and, all other things being equal, his life will be longer.

With the evils incident to our civilization clinging to us, and with no immediate prospect of their being removed by a general return to a strict observance of **Nature's Laws**, it remains for us to do the best with the materials at our command.

The art of preserving and restoring health by artificially inducing a natural action of the skin, has, at various periods, received a large amount of attention; but of all the means that have been - resorted to, there are none which have equalled in point of efficacy the application of water in the various forms of bathing practised throughout the world." - Richard Metcalfe, F.S.S, in "Sanitas Sanitatum et Omnia Sanitas", Vol. I, 1877.

> ***"Nature always tries to purify the blood and the whole of the body, transmits on purpose to the outer surface in an effort where it can noxious matter."*** *- Sebastianus Aquilianus, in "De Morb. Gall.", c. 2., 1498.*

> ***"Give Nature opportunity, and Nature herself will heal. It is the silliest thing in the world to attempt to arrest cancer of the tongue, say, by cutting off the tongue.***
> ***What the physician should strive for, if he gets a case in time, is to change the metabolism of the body so that the cancer, or another affliction, dies of itself.***
> ***The chemistry of the body can be so altered as to eliminate disease. Diet Can Markedly Influence Bodily Behaviour is well known. The body spends an absurdly disproportionate share of its energy getting rid of waste, and that therefore, when the body is ill, it will be much freer to combat illness and build healthy cells if the amount of waste is drastically cut down."*** *- John Gunther, in "Death Be Not Proud", 1949.*

Beware of too much ammonia and ammonia products. For these are becoming hindrances, to the activities of the Muscular forces in the aorta arteries to the body.

For the Ammonia tends to make for a Depressing of the Nervous System!

Exercise And The Lymphatic System

"Pooling of Lymphatic Fluids can lead to blockages and swelling known as Lymphostatic Oedema.

This occurs through the accumulation of Toxins, reducing the function of cells and potentially leading to metabolic and infectious complications.

The Lymph System requires:

1. **Breathing,**
2. **Movement**

From the body's muscles to help move fluids, and remove waste from the body." - in "Exercise, Lifestyle and the Lymphatic System", Clinical Prevention + Rehabilitation, 20 March 2018.

Leukocyte Redeployment During Exercise And Recovery

"A single exercise bout causes profound changes in the number and composition of blood leukocytes that may persist long into exercise recovery.

All major leukocyte subpopulations tend to increase in number during exercise as a result of hemodynamic shear stress and/or catecholamines acting on leukocyte β2-adrenergic receptors.

Physical treatments that are used after exercise (e.g., Hydrotherapy and Massage) may enhance the athlete's sense of well-being and should be considered as adjunct therapies for maintaining immune health." - in "Recovery of the immune system after exercise", Journal of Applied Physiology, May 2017.

> *"The immune system is a network of special cells, tissues, proteins, and organs that work together to protect the body from potentially damaging foreign invaders and disease.*
> ***When our immune system functions properly it detects threats, such as bacteria, parasites, it triggers an immune response to destroy them.***
> ***Many factors, including diet, exercise, and sleep, can impact immune response."*** *- in "Medical News Today", 25 January 2018.*

The Care And Cleansing of The Body

"Your body is built up of trillion cells, each one of which is like your body as a whole, in that it must nourish itself, carry on its own life processes, and then contribute its quota to the life work of the whole organism.

Some of these cells are producing one kind of waste, others are producing other kinds of wastes, according to their functions and the processes they are carrying on.

Many of the cells are dying, and their bodies must be disposed of and, finally, the residues of digestion and the foreign materials which contact with the environment causes to accumulate on the body surfaces must be disposed of.

We have elaborate and very efficient mechanisms for taking care of all of these wastes and for protecting the body from injury by them.

A little conscious co-operation on our part will greatly assist in carrying on these necessary cleansing processes.

In all life processes, the energy expressed is produced at the expense of living tissue.

In burning the fuel for supplying the life energy, we are also constantly burning the fire box.

This not only necessitates the processes of nutrition to make good this waste, but it also makes necessary a process of elimination by which the residues can be removed.

In such tissue destruction, there is a certain solid waste containing nitrogen, which corresponds to the ashes in the fire box of the stove.

This solid or nitrogenous waste is the most difficult of all to handle and eliminate.

The other 2 forms of waste, to wit: gaseous (carbon dioxide) and liquid (water) are more easily handled.

The nitrogenous wastes are carried out by the lymph and absorbed by the blood and eventually find their way to the liver, where they are converted into urea, a form of waste not nearly so poisonous as the original forms in which they come from the muscles, nerves and other active tissues.

Urea is thrown back into the blood by the liver, and such part of it as finds its way to the kidneys is removed by these glands, thrown into the secretion of the kidneys, the urine, which upon being voided, throws these wastes out of the body.

While by no means all the blood goes through the kidneys, enough of it passes through these organs and is cleaned of its solid wastes, such as urea, salt, uric acid, etc., that when this cleansed blood is mixed in the heart with the waste-filled blood from other parts of the body, the proportion of waste is kept down to a figure that is compatible with health.

The blood is never free from solid wastes.

What we call clean blood, is blood that carries only a safe percentage of wastes.

The solid wastes are also excreted to some degree by the skin and the bowel.

It may be of interest to know that perspiration is very similar to urine and in fact may be considered a thin urine.

About 800 ml to 1.4 litre per day are excreted without visible sweating.

Of course larger amounts are excreted during the summer and when an active occupation leads to visible sweating.

The importance of the skin as supplementing the function of the kidneys is very great.

You probably have noticed when you are sweating a great deal, you pass very little urine, and such urine as you do pass is usually highly coloured, because of its concentration.

If, for any reason, your kidneys become deranged, you can take a great deal of work off of them, by keeping the skin more than usually active.

Another indication of the relations between the skin and kidney functions is to be found in the fact that in the spring when warn weather comes, and the sweat function suddenly increases, the kidney function is very much reduced, while in the fall when cool weather comes and the sweating is suddenly depressed, the kidney function is greatly increased.

A physician usually has a steady stream of patients in the spring and fall, who come to him frightened by their self diagnosis of Bright's Disease, **due merely to the adjustment of the kidneys to this change in the sweating function of the skin.**

Possibly it may encourage more frequent bathing to be reminded of the fact that at least 800 ml of sweat evaporate from the body every day, leaving on the skin their solid residues.

The Skin

The skin is very thickly studded with sweat glands.

They are most numerous in the palms of the hands and soles of the feet.

Humans have between 2 Million and 5 Million Sweat Glands.

They're located all over our bodies, except inside our ear canals and on our lips and genitals.

They're most concentrated on the bottom of our feet and least concentrated on our backs.

These glands are small tubules made by the punching in, or invagination of the lower layer of the outer stratum of the skin.

They open to the surface, not with distinct tubes that come out to the outside, but underneath the outer layers of dead, horny cells, which constitute the hard surface covering of the skin.

The sweat discharged from these tubes finds its way out through these horny cells, and where it is not evaporated rapidly causes a softening of these cells, producing a condition which causes bacterial growth and the putrefaction of the softened material.

It is on this account that **the ventilation and the evaporation of sweat from all parts of the body, especially from the feet and hands is so important for the health of the skin of these parts.**

This is also another reason why bathing is so necessary for persons wearing thick clothing and especially of those parts of the body where good ventilation and rapid evaporation are not possible.

In addition to the known functions of the skin, there is an unknown function of excretion which is of such great importance that to varnish the skin or to cover it with anything that renders it impervious to the excretion of this unknown substance, will cause death very quickly.

The Kidneys

The kidneys consists of great numbers of fine secreting tubes, arranged for the discharge of their secretion into a common chamber from which it is carried by the ureters to the bladder for storage until some convenient time for voiding.

The essential element of the kidneys is this secreting (uriniferous) nephron tubule. It is estimated that there are about 1,000,000 nephrons in each human kidney. **The kidneys, however, are much more active glands than even the skin,** except when excessive heat production requires a great deal of evaporation from the skin in order to keep the body cool. The average excretion of urine is about 1.5 litre per day. In case the blood is carrying an excess of some solid, such as sugar, which must be got rid of by the kidneys, their excretions may amount to a great deal more, as 3 litres per day. Diabetes is a condition in which there is a great excess of sugar in the blood, which can not be used by the muscles and must be excreted by the kidneys. This condition results in an enormous increase of urine secretion. In a form of kidney inflammation called interstitial nephritis, the kidney secretion is also considerably increased.

While kidney function is supplemented by the bowel and skin, these organs cannot entirely replace it, for death inevitably results from the removal or loss of function of both kidneys.

There is a case on record of one man who lived for 14 days after the surgical removal of his only kidney, but this is the only record of any man having lived so long under such conditions.

Toxaemia

Death always results from uremic poisoning due to an accumulation of waste in the blood. If you take into account the fact that the kidneys are chiefly concerned with the removal of protein wastes. And the further fact that the absorption from the intestinal tract of more protein than is needed to make good the tissue losses will add to the wastes that must be handled by the kidneys.

You will easily see that the eating of an excessive amount of protein will overburden the kidneys, while the reduction of the amount of protein foods will lighten their work.

Sources of Protein

Protein foods are the meats, especially the red meats and the legumes, such as beans, peas and lentils. Cereals also contain a considerable amount of protein.

The substitutes for these protein foods are the leafy vegetables, green beans, potatoes and other starchy and sugary foods.

Another organ that suffers from an excessive intake of protein foods is the liver, upon which falls the task of changing such foods into urea.

When we consider how important it is that the kidneys be able to perform their important cleansing functions and how much added burden can be thrown upon then by an improper diet, we see how important it is that we co-operate with these organs by saving them unnecessary work.

The average diet contains probably twice as much protein as we need.

This makes the liver and the kidneys do twice as much work in eliminating nitrogenous wastes as is necessary for the perfect cleansing of the body.

Not only does it overburden the kidneys, but it clogs the blood with these extra wastes while they are being carried to the kidneys

The skin secretes sweat and pours it onto the surfaces of the body for evaporation.

The Bladder

The kidneys secrete urine and store it in the bladder.

The reason the skin needs no bladder for sweat storage is that it can easily be disposed of by evaporation, while there is no such ready means for disposing of kidney secretion and the constant voiding of urine would very seriously interfere with the normal life processes.

In fact, this is one of the most troublesome complications of certain spinal cord lesions in which control of the muscles of the lower part of the body is lost.

The cleansing of the blood by the kidney's must go on constantly, but the voiding of the urine must wait for a convenient time and place.

Thus the storage reservoir of the urine is as important in its way, as is the secretion function of the kidney in its way.

You must not, however, abuse the storage function of the bladder.

See to it that the bladder is emptied as frequently as convenient and that the urine does not become over-concentrated by remaining too long in it.

Such an over-concentration of urine leads to the formation of stones and the over-filling of the bladder causes backing up in the kidneys with the stretching of the ureter and an interference with the kidney circulation and function.

You should avoid nervous anxiety about the filling and emptying of the bladder, but at the same time **you should also avoid too prolonged accumulation and retention of urine.**

The Bowels

The bowel is the third important organ for the cleansing of the body.

Ordinarily, we think of the bowel as merely an organ of digestion and absorption, with means for disposing of the residues left after the digestion and absorption of foods.

In addition to these functions, the bowel is also a true organ of excretion.

If a section of bowel be separated from the rest of the tube, but left with its blood vessels and nerves intact and then after having been washed out, have its ends tied. This section of bowel, which can not receive any food material or food residues, will be found after a few days to be filled with an accumulation of material that has been thrown into it from the mucous membrane which has removed this material from the blood and lymph.

The bowel is a true organ of excretion, along with the kidneys and skin in the elimination of solid wastes.

It is for this reason that one who is fasting must still have a movement of the bowels every day or so.

The wastes thrown into the bowel from the blood must be removed just as the urine must be removed from the kidneys which secrete it and the bladder which stores it. In addition to excretion by the intestinal mucous membrane, the bowel also carries another important excretion.

This is the colouring matters of the bile. These substances are the wastes resulting from the destruction of worn out red blood corpuscles. Hemoglobin is the protein inside red blood cells that carries oxygen. Red blood cells also remove carbon dioxide from your body, transporting it to the lungs for you to exhale. Red blood cells are made inside your bones, in the bone marrow.

They typically live for about 120 days, and then they die. Their dead bodies must be removed from the blood constantly or the stream would soon become clogged with them. The liver, assisted by the spleen, attends to this important cleansing function, throwing off the resulting debris in the bile. If these bile wastes are not removed from the gall tract, they tend to become over-concentrated and form stones.

If too long stagnant in the intestines, they probably would form stones there.

Furthermore, **if not removed from the intestines, they will be absorbed and produce jaundice. The bowel, therefore, must be kept in an active self-cleansing condition in order to dispose of the residues of digestion and the wastes secreted into it from the blood and lymph.**

The bowels are exceedingly important as organs for the cleansing of the tissues and cells of the body.

The Lungs

The lungs are the 4th important organ for the Cleaning of the Body.

Not only do the Lungs supply Oxygen to the Blood, but they constantly remove carbon dioxide and water from the blood. If you wish to get some idea of the amount of water removed from the blood by the lungs, just breathe against a frosty window pane for a few moments and notice how much moisture is condensed on that cold surface.

If you wish to get some idea of the amount of carbon dioxide excreted, blow your breath through a bottle of lime water and observe its clouding by the precipitation formed through its combination with the suspended lime. In addition to removing water and carbon dioxide from the body, the lungs also remove some other unknown substances of a very poisonous nature. It is these unknown volatile substances that make **stale air so dangerous, for they will cause death before the concentration of carbon dioxide in stale air can reach a dangerous percentage.** The lungs depend very largely upon the physical process of gaseous diffusion for their success as cleansers of the body. If the air you are breathing is already rich in carbon dioxide, then the amount of carbon dioxide your lungs can remove from the blood is decreased. **When the air you breathe is fresh and contains little or no carbon dioxide, the lungs are more efficient in their cleansing power.**

Four Great Systems of Elimination:
Skin, Kidneys, Bowels, Lungs

The cleansing of the body by the 4 great systems of elimination, skin, kidneys, bowels, and lungs, depends fundamentally upon the movement of lymph from the muscles and nervous system, in which the body's wastes chiefly are formed, to these organs.

The Lymph

Cleansing can never be complete, no matter how efficient the organs of elimination may be, unless the lymph stream is being constantly moved from the active tissues back into the blood stream through the lymphatic system.

Lymph movements, depend upon exercise.

The morning walk, setting up exercises, not only give you fresh air, start the blood flowing freely and promote digestion, but they do something more than this: they move the lymph out of the muscles and cause these muscles to be filled and re-filled with fresh lymph secreted from the capillaries, greatly promoting the processes for cleansing the body.

Massage

For bed-fast persons or those who are incapable of taking exercises, proper Massage, covering the whole body and especially the large muscles of the lower extreme ties and the back should be constantly employed.

Properly given Massage can be made to take the place of exercise, in so far as lymph movement is concerned, and the cleansing of the body may be greatly promoted thereby.

Please Remember

Your body is a Living Temple - the Temple of the living God, Keep this Temple clean, inside and outside.” - in “Emunctories”, Brief Course in Practical Psychology, Weltmer School of Health, 1924.

Chapter 21

Lymphatic System

The 3 Functions of the Lymphatic System

1. Immune Function: Protection.
2. Lacteal System Function: Lipid Absorption, and Transport.
3. Emunctory Function: General Purpose Cleansing.

The Glymphatic System

"Clearance of Excess Fluid, and Interstitial Solutes Is Critical for Tissue Homeostasis.

In the peripheral tissues soluble material, proteins and fluid from the interstitial space are returned to the general circulation by the Lymphatic System.

The Lymphatic Network Extends Throughout All Parts of the Peripheral Tissues and the Density of Lymph Vessels Correlates with the Rate of Tissue Metabolism.

Although the brain and spinal cord are characterized by a disproportionally high metabolic rate, and Synaptic Transmission Is Exquisitely Sensitive to Changes In Their Environment, the Central Nervous System completely lacks conventional lymphatic vessels.

The Glymphatic System is a recently discovered macroscopic Waste Clearance System that utilizes a unique system of perivascular channels, formed by astroglial cells, to Promote Efficient Elimination of Soluble Proteins and Metabolites from the Central Nervous System.

Besides Waste Elimination, the Glymphatic System may also function to help distribute non-waste compounds, such as glucose, lipids, amino acids, and neurotransmitters related to volume transmission, in the brain.

Intriguingly, the Glymphatic System Function Mainly During Sleep and is largely disengaged during wakefulness.

The biological need for sleep across all species may therefore reflect that the brain must enter a state of activity that Enables Elimination of potentially Neurotoxic Waste Products." - in "The Glymphatic System – A Beginner's Guide", Neurochem Res., 7 May 2015.

The Interstitium System

The Third Body-Wide System for the Circulation of Fluids, in addition to the Cardiovascular and Lymphatic Systems.
The Interstitium, Cardiovascular, and Lymphatic Systems; Form an Interconnected Trio that regulates: Fluid Balance, Immunity, and Cellular Communication. Together, they ensure every cell in the body receives nutrients, rids itself of waste and is protected.

1. Cardiovascular System: (or circulatory) system is a vital network comprising the heart, blood vessels, and blood. Its primary function is to deliver oxygen and essential nutrients to the body's cells while efficiently removing carbon dioxide and metabolic waste.

2. Lymphatic System: is a vital drainage and immune network. It maintains fluid balance, removes toxins, and transports dietary fats. It acts alongside the circulatory system to protect the body and absorb nutrients

3. Interstitium System: It acts as a major shock absorber, cushions tissues, and serves as a crucial fluid highway that moves nutrients and carries waste away from cells. The fluid that flows through the Interstitium is the Interstitial Fluid. It holds roughly 20% of the body's total fluid volume. It acts as the body's primary fluid reservoir, but disruptions in fluid pressure can lead to swelling (oedema).

The Body Interstitial Spaces: A Vast Interconnected Whole

The Interstitium is a vast network of fluid-filled spaces supported by a latticework of collagen and elastin fibers, existing between the skin, muscles, and internal organs. It acts as a bodily "superhighway" that regulates fluid balance, cushions cells, and supports immune function.

"These fluid-filled spaces were discovered **in connective tissues all over the body, including below the Skin's surface; Lining the Digestive Tract, Lungs and Urinary Systems; and surrounding Muscles** ("Structure and Distribution of an Unrecognized Interstitium in Human Tissues", Scientific Reports, 27 March 2018).

About 66% of that water is found inside cells, but the other third is outside cells and is known as "interstitial" fluid.

Researchers already knew that **there is fluid between individual cells**, the idea of a larger, connected Interstitium - in which **there are fluid-filled spaces within tissues** - had been described only vaguely in the literature.

The new study expands the concept of the Interstitium by showing these structured, fluid-filled spaces within tissues, and is the first to define the Interstitium as an organ in and of itself.

The more tissues I saw, the more I realised it's everywhere." - in "Meet Your Interstitium, a Newfound "Organ" These fluid-filled spaces were found in the body's connective tissue", Scientific American, 27 March 2018.

Interstitium Vast Interconnected Network of Fluid-Filled Spaces Throughout the Body

"The existence of an apparent conduit between skin and the fascia beneath it - 2 tissue layers connect with each other.

This is clearly a third bodily system for the circulation of fluids, in addition to the Cardiovascular System and Lymphatic System. To get a sense of the inside of the interstitium, picture a sheet of Hexagonal Wire Mesh embedded in a gel.

The Hexagonal Wire Mesh represents collagen, a type of protein. Inside the Interstitium, bundles of collagen interlock with one another, providing strength and structure. The spongelike gel, able to absorb and store water, is made from Hyaluronic Acid, and fills the spaces between the collagen bundles.

Fluid, cells and other molecules slowly flow through this gel. In this new view of the body's interstitial spaces, these microscopic areas connect to one another within a larger web, through which fluid moves before re-entering the Lymphatic System, and Cardiovascular System, like groundwater flowing through the Earth's crust before returning to the surface in springs and rivers." - in "Inside the Interstitium, the Human Body's Hidden Pathways", The New York Times, 11 May 2026

Structural Continuity Across Organ Boundaries

"Bodies have "reticular networks" comprising collagens, elastin, glycosaminoglycans, and other extracellular matrix components, that are continuous within and around all organs. Fibrous tissue coverings of nerves and blood vessels create structural continuity beyond organ boundaries.

The work of Franklin Mall over a century ago as well as modern day decellularization techniques demonstrate that there are "reticular networks" made up of collagens, elastin, glycosaminoglycans, and other Extracellular Matrix components surrounding, within, and between organs.

These networks have biological and mechanical roles in defining the architecture and physiology of organs. Multiorgan decellularization has further confirmed that **Extracellular Matrix networks extend beyond the confines of single organs to involve neighbouring structures, including Thoracic (Heart); Abdominal (Liver, Gut, Kidneys); Pelvic (uterus, prostate, urinary bladder) organs with their vasculature and surrounding fibrous, adventitial sheaths, creating structural continuity across organ boundaries.**

More recently, decellularization of entire fetal sheep shows that; **the connective tissue network is continuous throughout the body and that the connective tissue of nerves creates structural continuity between the Nervous System, and other tissues.** Dissection of human bodies likewise demonstrates **continuity across large, multi-organ regions of the body, including the entirety of the dermis, and the fascia of diverse organs and organ systems. The large interstitial spaces, which appear as empty white spaces on routine formalin-fixed, paraffin embedded histochemically-stained specimens, are filled with Hyaluronic Acid (as most of the other proteoglycans, and its capacities for multiple interactions with other molecules gives it the ability to function as a "multipurpose glue" in cellular interactions). This finding allowed us to demonstrate that interstitial spaces are continuous between tissue compartments and fascial planes in the colon, skin, and liver, as well as within the fibrous tissues around blood vessels and nerves, which may pass through multiple organs.** While this has not, to our knowledge, been demonstrated previously for skin and colon and their adjacent tissues, it confirms Mall's experimental demonstration of continuity within the portal tract stroma. Based on Mall's experimental observations, the perivascular and periductal portal tract stroma **can be visualized as a unified network of fibers with intervening spaces that communicate with each other, and are in continuity with the vascular (entrance) and lymphatic (egress) systems in the liver.** Our findings are in agreement with Mall's observations: **Hyaluronic Acid staining was present in a continuous fashion within portal tract stroma ensheathing hepatic arteries, portal veins, and the biliary tree, in support of there being a continuous space. The intrahepatic portal triads show how spaces that are in and around structures including arteries, veins, nerves, and ducts (such as ureters, urethra, epididymis, Fallopian tubes, salivary gland exocrine ducts) that pass through multiple tissues and organs could serve as conduits for interstitial fluid. Particle Movement by flow through fluid-filled channels likely arises from external and internal (physiologic) mechanical forces such as Peristalsis of the gut, positional or mechanical pressure on the skin and subcutaneous tissues, and rhythmic compression of perivascular/adventitial stroma resulting from arterial wall expansion in systole.** Diaphragmatic movement between inhalation and exhalation will also cause rhythmically oscillating pressures on tissues in the thorax and the abdomen that may not have strong driving pressures from other sources, such as the mesentery. Movement of fluid through interstitial spaces of the perineurium may be subject to all these influences, as well as limited by the phenomenon of interstitial exclusion.

Likewise, **continuity across tissue planes could explain the clinically recognized "discontinuous" spread of cancer such as mesenteric tumor deposits of colorectal cancer and subcutaneous melanoma "in transit" metastases.** These findings have important implications for other processes such as infections, autoimmunity, and host-microbiome interactions. **Interstitial spaces across the human body could act as pathways for both commensal micro-organisms of the human microbiome and various pathogens.**

Gut-Liver Axis

Direct continuity across tissue planes may explain necrotizing fasciitis, a fulminant form of soft tissue infection resulting from virulent bacterial strains that gain access to the interstitial spaces and cause widespread necrosis of subcutaneous and perimuscular fascia and even cross the blood:brain barrier to cause meningitis. Continuity across the layers of the intestine and through the mesenteric and portal vein adventitia may provide a direct route for the translocation of gut bacteria to the liver (Gut-Liver Axis).The existence of these pathways, in parallel with the mesenteric lymphatic and portal venous systems, may play a significant role in gut microbiota signaling not only in chronic liver disease and cirrhosis, but also in the context of autoimmune disorders, both liver-specific (autoimmune hepatitis) and systemic.

The Central Nervous System has a System of Lymphatic Vessels

New evidence shows that **the Central Nervous System has a System of Lymphatic vessels that line the dural sinuses and connect the Cerebrospinal Fluid space to the Cervical Lymph Nodes; one anatomic route of this connection could be via the peri-arterial adventitia of the carotid arteries.**

Gut-Brain Axis

The presence of interconnected interstitial spaces of channels that track along the perineurium of the peripheral nerves provides a potential novel route of communication between the Gut and the Brain (Gut-Brain Axis).

We demonstrate that **the fibrous layers of nerves and blood vessels have no discrete separation from the fibrous components of the organs through which they travel and that, likewise, their interstitial spaces are not segregated from each other.**

Thus, we suggest that **there is continuity of fibrous tissue interstitial spaces within and between organs and that these spaces are also potentially continuous between more distant parts of the body, at least along the vasculature and nerves.**

These spaces serve as pathways for molecular signaling and cell trafficking in a way that is both in series and in parallel with the established pathways of the Cardiovascular and Lymphatic Systems, although flow is likely limited by the structural proteins and glycosaminoglycans of the Interstitium.

Given that the estimated volume of interstitial fluid in the body is more than 3 times the combined fluid volume of the Cardiovascular and Lymphatic Systems, the existence of an interconnected interstitial compartment suggests an anatomic basis for understanding both physiological processes and disease pathophysiology." - in **"Interstitial spaces are continuous across tissue and organ boundaries in humans"**, Communications Biology, 31 March 2021.

Chapter 22

The Effects of Anaesthesia Upon the Brain

"The Relationship between general Anesthesia, Brain Function, and Consciousness Mechanisms. Anesthetic agents do not blunt out brain function globally but exert specific and dose-dependent effects on brain systems that sustain internal consciousness and perception of the environment. Each agent has its own mechanism of action, and dose-dependently induces distinct phenomenological altered consciousness states. Answering the questions that have recently emerged following recent discoveries on anesthetic brain effects will probably permit new insights into the specific diagnoses of anesthesia-induced altered states of consciousness, and into the understanding of the different aspects of consciousness itself. In that respect, general anesthesia can be considered as a flexible probe to explore Consciousness." *- in "General Anesthesia: A Probe to Explore Consciousness", Frontiers in Systems Neuroscience, 14 August 2019.*

"When some patients are on the verge of death, they begin to act differently. They begin to control parts of their body, that they never thought possible, and I've seen this many times, because we have ways of bringing patients to death's doorstep, and bringing them back safely. It's called General Anesthesia. Anesthesia isn't sleep or or a nap. Anesthesia is actually a Deep Coma, that turns off the organs throughout your body to varying degrees, including those organs that we associate most with life, like the Brain and the Heart. I was taught, that Anesthesia was a Coma, that you go into, and you come out of after surgery and that's it. But after several years, I realized there is a lot more to it. A lot more going on in your deep subconscious." *- Dr Anthony Kaveh, MD, in "3 Secret Unconscious Powers that Reveal Under Anesthesia", 10 September 2023.*

"No one had really made this connection between that type of non-ordinary state of consciousness, the kinds of closure they seem to get, the kind of working through problems that seem to occur in the patients that Dr Harrison Shong-Wen Chow, MD is writing about are the same sorts of stories that I had been hearing about in patients undergoing psychedelic therapy. And it immediately seemed to me that there was a link. And that's what set us on this current path of studying Dreams induced by Anesthetics for mental health purposes. It's this basic idea that there's an altered state, that we can induce by any number of means that can allow people to process trauma."
- Dr Boris Heifets, MD in "What happens in the Brain under Anesthesia?", 17 May 2025.

"I was diagnosed with breast cancer. In August 2022, I went to Stanford Health Care, near Palo Alto, California, for a lumpectomy and was put under anaesthesia.
I had my surgery late in the day, It was a very extremely stressful day.
The nursing Anesthesiologist came into the room, and told me what's going to happen, and next thing I'm under, and I don't remember anything. And then I remember very extremely vividly, like in 4K resolution, like every colour of the rainbow you could come up with, and with heightened sound. I was having the first sort of experience.
They like to call it a dream, but I call it an experience. And in this one I was watching our youngest child be born. He's now 17. And I was sort of hovering over the birth. And, it wasn't really watching the birth. It was more like sucking in the beauty, and the joy, and seeing people, and hearing voices, and seeing him in his little baby bassinet thing. And, I was just sort of like hovering above it like sort of sucking, in the love and the memories and the emotions of that." *- Mare Lucas, in "What happens in the Brain under Anesthesia?", 17 May 2025.*

"A common pattern of regional activity suppression is emerging for which the Thalamus is identified as a key target of Anesthetic effects on consciousness. It has been proposed that a neuronal hyperpolarization block at the level of the thalamus, or thalamocortical and corticocortical reverberant loops, could contribute to anesthetic-induced unconsciousness. *It is proposed that those few anesthetics not associated with a global metabolic suppression effect might still have their effects on consciousness mediated at the level of thalamocortical interactions, if such agents scramble the signals associated with normal neuronal network reverberant activity. The basis for the original observation of* ***anesthetic effects on the thalamus: For the anesthetic end-point of loss of consciousness in humans,*** *a more recent case has been made for a common effect of most, if not all,* ***agents on thalamic metabolism/blood flow and thalamocortical–corticothalamic connectivity. This commonality observation led to the development of the 'Thalamic Consciousness Switch" hypothesis of anesthetic induced unconsciousness.***

> *The fact that anesthetics have an ability to affect thalamocortical signaling is well recognized from in vivo electrophysiological work.*
>
> ***Why is the thalamus at the heart of anesthetic effects on consciousness?***
>
> *The centralized placement of the thalamus within the brain and its unique direct access to all incoming sensory information, except for olfactory information, along with its access to cortical feedback, places the thalamus at the center of interest as a brain region that might have a central role to play in the mechanisms of consciousness and attention.*
>
> ***It appears that a convergence of evidence points toward the thalamus, thalamocortical, and corticocortical interactions as being critically involved with mediating not only anesthetic induced unconsciousness, but also with mediating other forms of altered states of consciousness."*** *- in "General Anesthesia and the neural correlates of Consciousness", Progress in Brain Research, 2005.*

> ***"The thalamus has been thought of as a "relay" that simply forwards signals to the cerebral cortex. Newer research suggests that thalamic function is more selective. Many different functions are linked to various regions of the thalamus. This is the case for many of the sensory systems (except for the olfactory system), such as the auditory, somatic, visceral, gustatory and visual systems where localized lesions provoke specific sensory deficits. A major role of the thalamus is support of motor and language systems, and much of the circuitry implicated for these systems is shared."*** *- in "Thalamus", Wikipedia, 18 June 2025.*

"We report on a patient undergoing surgical hand repair after a recent knife attack; who experienced vivid dreaming and subsequent remission of acute stress disorder.

After local Anesthesia with Propofol Sedation, she recalled a Dream wherein she relived the attack, sought medical care, completed surgery, and returned home with a healed hand.

This case details potential Associations between Anesthetic state, Dreaming, intraoperative electroencephalography, and Remission of a Psychiatric Disorder." - in "Anesthetic-Induced Intraoperative Dream Associated With Remission of a Psychiatric Disorder A Case Report", Anesthesia & Analgesia Practice, August 2022.

Chapter 23

Thalamus

> ***"The Thalamus is the Body Information Relay Station.***
> ***All information from your body's senses (except smell) must be processed through the Thalamus before being sent to the Brain Cerebral Cortex for interpretation.***
> ***The Thalamus also plays a role in sleep, wakefulness, consciousness, learning and memory."*** *- in "Cleveland Clinic", 2022.*

"The Thalamus of the brain is far more than the simple sensory relay it was long thought to be. From its location at the top of the brain stem it interacts directly with nearly every part of the brain. Its dense loops into and out of cortex render it functionally a seventh cortical layer.

Moreover, it receives and sends connections to most subcortical areas as well.

It does function as a very sophisticated sensory relay and thus is of vital importance to perception.

But also it functions critically in all mental operations, including attention, memory, and consciousness, likely in different ways for different processes, as indicated by the consequences of damage to its various nuclei.

It plays a critical role also in the arousal system of the brain, in emotion, in movement, and in coordinating cortical computations." - in "The Thalamus: Gateway to the Mind", WIREs Cognitive Science, November 2013.

Thalamic Consciousness Switch

"The thalamocortical pathway is thought to play an important role in sensory information transfer, raising the concept of Thalamic Consciousness Switch.

Corticocortical integration has also been postulated as essential for consciousness, with the experimental evidence that the corticocortical information integration level has been observed to significantly decrease during sleep and anesthesia.

Although the extent to which these mechanisms contribute for consciousness may be argued, it seems that these two mechanisms are not exclusive but rather constitutes a hierarchical structure for the emergence of consciousness.

The mismatch between the blackout period and the steady state of order parameter might originate from sequential recovery of this hierarchy.

We cannot say that the order parameter which quantifies the level of thalamic information blocking as the only and all-powerful index for measuring consciousness level, but we can say that the order parameter reflects the change of the primary level in the hierarchical mechanism for consciousness.

From the order parameter diagram represented as a function of anesthetic concentration, we observed the existence of metastability and path-dependency in the periods of consciousness transition induced by anesthesia.

In our study, it is conceptually interpreted as the expectation value of the global resonance level among different functional units.

Not restricted to this single approach, the order operator can be defined in various ways depending on the target system's characteristics and utilized independently of measurement modality and number of measurement sites.

The formulation described in this work can promote the quantitative investigation of brain state transition characteristics.

Unquestionably, anesthesia is not the single route to unconsciousness, and the resonant oscillations of the thalamocortical system are not the unitary correlate of unconsciousness; however, this bottom-up approach has the advantage of enabling a gradual understanding of the ''states'' of consciousness." - in "Characterization of Phase Transition in the Thalamocortical System during Anesthesia-Induced Loss of Consciousness", PLoS ONE, 7 December 2012.

The Oxygen Needs of the Brain

The Brain Oxygen demands are enormous; despite comprising only 2% of the body.

The Brain consume 20% of the body's Oxygen supply.

The Brain consume 25% to 30% of the overall Glucose consumption.

Total Energy consumption of the Brain is 20 Watts.

The Body total Energy consumption runs on 80 Watts.

The Thalamus, like the rest of the Brain; Requires a Constant Supply of Oxygen to Function Properly:

"The Central Nervous System is made up of grey matter and white matter.

However, grey matter plays the most significant part in allowing humans to function normally daily. Grey matter makes up the outer most layer of the brain.

The white matter and grey matter are similar as they are both essential sections of both the Brain, as well as the Spinal Cord. The grey matter gets its grey tone from a high concentration of neuronal cell bodies.

The highest concentration of neuronal cells is in the Cerebellum, which has more than the rest of the brain combined.

The last section of grey matter in the spine is known as the lateral grey column. This lateral grey column is found in the middle of the grey matter of the spinal cord and extends out to the sides from the base of the spine.

The lateral grey column is responsible for regulating the autonomic nervous system through its role in activating the sympathetic nervous system. Many Issues May Affect the Grey Matter found in the brain and the Spinal Cord.

One of the Most Prevalent Health Problems occurs when Plaque Begins to Build up in areas of Grey Matter within the Brain. These areas, known as senile plaques, take up space that was once grey matter, leading to a decrease of higher functioning. Trauma also play a role in creating issues that stem from the grey matter. Since the neuronal cells of the grey matter are constantly working, they require a high supply of Oxygen to function efficiently. Therefore when the Grey Matter does not have access to Oxygen, the Cells will Begin to Die, leading to possible irreversible brain damage and loss of function. Additionally, under blunt force trauma situations, the grey matter may become damaged due to an intracerebral hemorrhage, which can lead to apoptosis of the grey matter cells."
- in "Neuroanatomy, Gray Matter", StatPearls, January 2025.

> ***"Taking into account the anatomy and functional evidence, it becomes impossible to relegate the Thalamus to a mere background condition for consciousness. Close interactions between Thalamus and cortex shape the neural landscape across micro-, meso-, and macroscales, giving rise to differences in information-processing capacity and network interactions associated with different states. Mounting evidence suggests that these thalamocortical interactions directly shape the contents of consciousness by gating access to perception. He conclude that the Thalamus plays a central topological role in brain structures controlling conscious experience."*** *- in "Thalamic contributions to the state and contents of consciousness", Neuron, 15 May 2024.*

"The Thalamus probably has a substantial role in some patients with central pain, either as a pain generator or by abnormal processing of ascending input.

Long-term post-stroke pain disorders can reduce the quality of life, affect mood, sleep, and social functioning.

Half of the body pain is common in patients with Thalamic lesions.

Hyperbaric Oxygen Physiologic and Pharmacologic Effects Benefits in:

1. **Brain-related Hemorrhages.**
2. **Acute and Chronic Stroke.**
3. **Traumatic Brain Injury.**
4. **Mild Cognitive Impairment.**
5. **Neurodegenerative Diseases.**
6. **Neuroprotection.**

Thalamic Pain Syndrome is a distressing type of Central Post-Stroke Pain that occurs in up to 10% of cases following a Cerebrovascular Accident, typically with a delayed onset of signs and symptoms, and is often chronic or even life-long. Central pain also occurs after Vascular Insults in parts of the Central Nervous System other than the Thalamus.

Case report of the use of Hyperbaric Oxygen (HBO2) for the treatment of Thalamic Pain Syndrome (Dejerine–Roussy Syndrome), a type of Central Post-Stroke Pain, also known as Post-Stroke Thalamic Pain. The patient's symptoms resolved and quality of life markedly improved with Hyperbaric Oxygen Therapy.

HBO2 has been reported to be An Effective Treatment for Multiple Brain-Related Diagnoses:

1. **Traumatic Brain Injury.**
2. **Acute Stroke.**
3. **Neurodegenerative disease.**
4. **Cognitive Impairment.**

Mechanisms of Action

Amelioration of oxidative stress;
Activating endogenous antioxidant activity;
Modulation of neuro-inflammation;
Inhibiting apoptosis;
Stimulating pathways of neuroprotection;
Modulating cerebral blood flow and brain metabolism.

Innate Brain Repair Processes

HBO2 during the degenerative (or acute post-stroke) stage could increase post-injury damage; but that Elevated Oxygen during the regenerative stage would Supply the Energy Needed for the Innate Brain Repair Processes. HBO2 can induce significant neurological improvement and that neuroplasticity can be operatively activated in chronic late-stage stroke patients long after the acute brain insult." - in "Hyperbaric Oxygen Therapy (HBOT) for Thalamic Pain Syndrome", Frontiers in Neurology, March 2024.

Chapter 24

Every Part of the Body Sympathizes with the Mind

"Hippocrates the Asclepiad says that the nature even of the body can only be understood as a whole." *- Plato in "Phaedrus"*

"There is not a natural action in the body, whether voluntary or involuntary, that may not be influenced by the peculiar state of mind at the time.
Every part of the body sympathizes with the mind, for whatever affects the mind, the body is affected in proportion. As a state of the mind is capable of producing a disease, another state of it may affect a cure.
Even tumors have yielded to the stroke of a dead man's hand. While we should naturally expect that diseases connected with the nerves - and those in which their alteration is in the action of parts not in their structure – would be most affected by the imagination, we find that there are other diseases in which they appear to have little connection that are much affected by the state of mind." *- Dr John Hunter, MD, in "The Works of John Hunter", 1835.*

"Such as are thy habitual thoughts, such also will be the character of thy mind; for the soul is dyed by the thoughts." *- Marcus Aurelius, Roman emperor (AD 121-180) , in Meditations, Book 5, ch. 16, 2.5, (tr. Long) 1862.*

The Influence of Ideas Upon the Body

"The influence of ideas upon the body gives rise to a very great variety of phenomena which border on the marvelous.

It may be stated as a general fact that any state of the body, which is conceived to be approaching and which is expected with perfect confidence and certainty of its occurrence, **will be very prone to ensue as the mere result of that idea,** if it do not lie without the bounds of possibility.

The case mentioned by Pictet, in his observations on nitrous oxide, may be adduced as an illustration of such phenomena. A young lady, wished to inspire this intoxicating gas; but in order to test the power of the imagination, common atmospheric air was given to her, instead of the nitrous oxide.

She had scarcely taken 2 or 3 inspirations of it, when she fell into a state of syncope, which she had never suffered previously; she soon recovered.

The influence of the ideas, when they are combined with a state of emotion, generally extends in all directions, affecting the senses, motions and secretions.

But even simple ideas, unattended with a disturbed state of the passions, produce most marked organic effects in the body.

The idea of our own strength gives added strength to our movements.

A person who is confident of effecting anything by muscular efforts, will do it more easily than one not so confident in his own power.

The idea that a change is certainly about to take place in the actions of the nervous system, may produce such a change in the nervous energy, that exertions hitherto impossible become possible.

This is still more likely to be the case, if the individual is at the time in a state of mental emotion." - Johannes Müller, in "Elements of Physiology", Vol. 2, 1842.

Psychogenesis and Internal Secretion

"It has recently been shown, through a brilliant experimental research by Cannon, of Boston, that the emotion of fear in animals is capable of stimulating the flow of adrenal secretion.

He demonstrated that in frightened animals the blood from the adrenal vein is so rich in adrenal substance as to be capable of inhibiting peristalsis in an isolated strip of intestinal muscle.

This is due to the presence, in appreciable amount, of adrenal substance, since contact of the latter, in a 1:1,000,000 solution, with the intestinal strip will also inhibit peristalsis. **We knew that the emotion of fear could inhibit gastric secretion; and Pavlov has shown that certain emotions of anticipatory joy can induce a flow of this secretion.**

Crile has shown, experimentally as well as clinically, that the emotion of fear increases the thyroid secretion; he demonstrated this clearly in certain cases.

Although we have been in the habit of regarding the autonomic nervous system as rigidly autonomic, these experiments show that the sympathetic fibers are somewhat under cerebrospinal control, because in each of the experiments the autonomic symptoms have occurred in virtue of the impressions upon the cerebrospinal nervous system.

It is reasonable to suppose that fear, which, when acute, such experiments have shown capable of exciting the autonomic nervous system and the glands thereto attached, may, when it takes the form of a chronic fear, also produce, less abundantly, but to an extent clinically manifest, an over-action of the autonomic nervous system and through it of the glands it controls.

I have seen cases of Addison's disease in which autopsy showed an atrophy of the adrenal-gland substance.

Hypoplasia follows hyperactivity of the thyroid gland as described by Wilson.

Their prolonged anxiety, demanding much adrenal juice for its pressor effect, would lead to eventual exhaustion of the gland and the hypoplasia found post mortem in my cases.

In these low-pressure cases, adrenal substance has been beneficial in my hands.

But a wise hygiene are also required to prevent continued exhaustion.

Such cases can later remain well without taking adrenal when properly re-educated. Thus, additional clear, physical intercorrelations of mind and body have been experimentally demonstrated, giving rise to inferences which explain what was formerly conceived of so vaguely.

From these it will not be difficult to evolve practical means for the relief of suffering and the cure of disease." - Dr Tom A. Williams, MD, in "Monthly Cyclopedia and Medical Bulletin", Vol.5, 1912.

> ***"I ask them a few questions: Do you worry about little things as well as big things?***
> ***Were you nervous of coming to see me?***
> ***Then when they know you are a friend and want to help them they will open their hearts to you. It is not a violation of their mental privacy, for so many say:***
> ***"I have never told anyone about this before but what a relief it is, it's like a load off my mind", and they relax both mentally and physically.***
> ***We consider this the beginning of healing. For those of you who want to know how a state of mind can react on the body, it is this: the involuntary nervous system, (the autonomic system), the ductless glands (the endocrine glands), are extremely sensitive to the thoughts going through the mind. If their normal functions are disturbed, then the fine chemical balance in the body is interfered with and the normal functions of the body are also interfered with. Then the natural resistance of the body to disease is lessened, the soil of the body is, as it were, in a poor state and the door is opened to the entry of any disease, any infection. Germs, bacteria can live in poor soil; they cannot survive in good, healthy, sweet soil."*** *- in "The Dr Edward Bach Remedies", 1940.*

Mind And The Stomach

"Intimate Connection Between the Mind and the Stomach.
Thus, we find Moral Causes very Much Influence it, such as:

1. **Excessive Grief.**
2. **Anxiety.**
3. **Care (Wariness).**
4. **Disappointment.**
5. **Intense Thought.**

All these, Joined to Want (lack) of Exercise, or (lack of) Impure Air, are apt to produce the complaint of which we now treat. Again; Great Sympathy Exists Between the Bowels and the Skin." - in "Man's Mission on Earth", 1868.

Emotion Can Ruin Your Health

"Emotions Cause Reflexes in just the same way as the prick of a pin can cause a reflex contraction of the leg.

It is also a well-known fact, as pointed out by McGregor, that **a man's emotional stability varies with his state of health and, I might also add, his state of fatigue.**

Dr Crile of the Cleveland Clinic, has shown conclusively that **long continued pain or physical injury leads to degeneration in the brain cells, and that exactly the same results can be produced by exhaustion, lack of sleep, or emotional tension.**

He has also shown that these results will disappear after sleep, provided the process has not gone too far.

Fear is certainly the most powerful stimulus known, and even when no action appears to result, it draws away nervous energy and produces exhaustion.

Sherrington conclusively **proved that disturbance of the internal organs was definitely just as much a part of the expression of emotion, as physical activity.**

All of this helps us to understand how a shower of nerve impulses coming down from a brain overwrought with worry, fright, or chronic fear can give rise to disturbances in the food canal.

It also shows us how wise the ancients were in giving such an important name as "the Abdominal Brain" to this collection of sympathetic nerve cells that you carry right under your liver, in the pit of your stomach." - Dr Joseph F. Montague, MD, "Emotion Can Ruin Your Health" - in "Science Digest", April 1943.

> ***"When the stomach gets deranged, whether from improper food, grief, anxiety, or any of the many causes which affect it, the Mind and the Stomach Go Hand in Hand, and Mutually Influence Each Other; Grief Disorders the Stomach, and Indigestion Disorders the Mind. In these cases, therefore, the state of the latter must be attended to and regulated, as well as the state of body. I make this observation, in order to show, that Exercise, However effectual in Restoring or Preserving Health, Will Not Succeed, Unless the Mind Be Employed Also."*** *- in "The Physician", The Belfast Magazine and Literary Journal, 1825.*

Heightened and Concentrated Attention

“Benjamin Rush wrote that he had frequently prescribed remedies of doubtful efficacy in the critical stage of acute diseases, but never till he worked up his patients into a confidence bordering upon certainty of their probable good effects.

He adds that the success of this measure much oftener answered than disappointed his expectations.

Tuckey in “Psycho-Therapeutics”, 1889, thinks that continuous fixation of the mind upon one special organ predisposes to disease of that organ and cites illustrative cases.

“The attention is occasionally heightened, or in a condition of unhealthy exaltation, as well as of concentration. This is observed when the mind has been continuously, abnormally, and sometimes involuntarily directed to certain vivid impressions, trains of thought, classes of ideas, conditions of emotion, or states of physical sensation. That psycho-somatic disease termed hypochondriasis, which manifests itself principally in a morbid anxiety as to the health, is, in its primitive nature, essentially a diseased concentration to, and consequent exaggeration of, organic conditions of physical sensibility, resulting often from slight bodily ailments, which eventually assume, in the distempered and deluded imagination of the hypochondriac, a grave and significant character.

Much of the disturbed thought, predominance of insane ideas, consisting inwretched illusions as to the state of the health, may unequivocally be traced to an undue convergence and misdirection of the attention to unimportant mental impressions and trifling nervous sensations.

The mind often dwells uninterruptedly upon particular emotions, fixedly upon certain states of thought, continuously upon specific classes of ideas, to the rigid exclusion of matters of healthy consciousness, and sane contemplation, until it loses all right, or sound appreciation of subjective and objective phenomena. The condition of intellect, previously referred to, often exists, to a certain extent, as a normal state, and as such only indicates the presence of health. It is, however, often a sign of psychical disease.

It is a well-established fact that alterations of tissue have been the result of a morbid concentration of the attention to particular organic structures.

Certain feelings of uneasiness, or even pain, originate in the mind a suspicion of disease existing in particular parts of the body, it may be the lungs, stomach, heart, brain, liver, or kidneys.

Some slight irregularities and functional disturbances in the action of these organs being noticed, are at once suggestive (to the hypochondriac) of serious and fatal disease being established in the part to which the attention is directed.

This deviation from a normal state of certain functions, frequently lapses into actual structural disease, as the effect of the faculty of attention being, for a lengthened period, morbidly concentrated to their action.

The continuous direction of the mind to vital tissues, imagined to be in an unhealthy state, undoubtedly causes an exaltation of their special functions, and an increase of sensibility, by concentrating to them an abnormal quantity of blood, this being followed, successively by:

1. Undue Vascular Action;
2. Capillary Congestion;
3. An Excess in the evolution of Nerve Force,
4. Appreciable Structural Alterations.

Thus, the mischievous influence of moral agencies is exercised upon the physical as well as psychical organism, laying the foundation of lesions of structure and perversions of thought originating in the mind itself. Morbid anatomy painfully attests the visible and tangible results of mental influences on the various physical tissues. How much of self-created bodily suffering, voluntarily courted physical pain, carefully, and alas! zealously trained, distressing, and incurable disease of the mind, arise from a lengthened anxiety, and continuous fret and worry as to the state of the corporeal and mental health!

The unceasing dread of the presence and constant morbid anticipation of approaching disease (whether of body or mind), very frequently creates the mischief so much anticipated, and so greatly apprehended. Insane delusions often thus originate. Hence the extreme danger of not exercising a watchful supervision, and active controlling influence over every thought, and the evil that arises from not keeping in a state of strict subordination the mental emotions." - Dr Forbes Winslow, MD in "Obscure Diseases of the Brain and Mind, 1860.

As an example of the extraordinary effects of purely psychical impressions I may mention the case narrated by MacKenzie, in which a patient who was subject to attacks of Rose Cold, was shown an Artificial Rose at a time when her nostrils had just been examined, her conjunctivse were normal, the nasal passages free and there was nothing to indicate the presence of her trouble.

Dr MacKenzie describes as follows the result of showing her the rose, which was a clever counterfeit:

"In the course of a minute she said she felt that she must sneeze.

This sensation was followed almost immediately by a tickling and intense itching in the back of the throat and at the end of the nose. The nasal passages, at the same time, became suddenly obstructed and the voice assumed a hoarse, nasal tone.

In less than 2 minutes the puncta lachrymalia began to itch violently, the right and afterward the left conjunctiva became intensely hypertemic and photophobia and increased lachrymation supervened.

To these symptoms were added, almost immediately, itching in the auditory meatuses and the secretion of a thin fluid in the previously dry nasal passages.

In a few minutes the feeling of oppression in the chest began, with slight embarrassment of respiration.

In other words, in the space of 5 minutes she was suffering from a severe Coryza (catarrhal inflammation of the mucous membrane in the nose), the counterpart of that which the presence of natural roses invariably produced in her case.

An examination of the throat and nasal passages was then made.

The right nostril was completely obstructed by the swollen, reddened, irritable turbinated structure; the left was only slightly pervious to the air-current; both were filled with a serous-looking fluid.

The mucous membrane of the throat was also injected, but did not exhibit the same amount of redness and irritability found in the nasal passages." - Dr J. William White, MD, in "The Supposed Curative Effect of Operations per se", Annals of Surgery, September 1891.

"The wish to be cured is a part of the cure." *- Seneca*

"The universe is change; our life is what our thoughts make it." *- Marcus Aurelius,*
Roman Emperor in "Meditations", (Tr. Henry Wood), 1893.

The Influence of the Power of Suggestion: Over Minds, Over Matter, Over Disease of Body or Mind

"To make every effort not merely to destroy the prevalent system of giving a vast quantity and variety of unnecessary and useless drugs (to say the least of them), but to encourage extreme simplicity in the prescription of medicines that seem to be requisite.

Many eminent authorities, could be given, all bearing testimony to the evil of this incessant drugging, which has, there is no doubt, actually produced numerous diseases now prevalent, weakening the human constitution, and, in many cases, prevented nature from effecting a cure.

We shall probably discover, eventually, means of operating on human beings through the medium of the nerves, or Neuropathically, so as to produce any given effect we choose, and thus avoid, except in a few instances, the administration of medicines, or drugs, in any form whatever.

In many nervous diseases the mere putting to sleep is of great service, and will sometimes cure.

This mysterious effect is, at times, produced almost instantaneously, and without any actual contact of the operator and patient; at other times it requires certain manipulations, and repeated attempts.

One nervous system can operate upon another, and even paralyze it.

This we have often seen done, and so have numerous other persons.

The facts we have given concerning the nervous system and its relations.

It is our duty at present to gather new truths, and when a sufficiency has been observed their explanation will soon follow.

Suffice it to say that mesmerism is fundamentally true, and that it has rendered valuable aid to the surgeon.

It is highly probable that mesmeric agency was employed in the cure of disease in very ancient times.

Considered as a cause of certain physiological phenomena, or as a therapeutic remedy, magnetism (mesmerism), ought to be allowed a place within the circle of medical sciences." - in "Neuropathy; or the true principles of the art of healing the sick; being an explanation of the action of Galvanism, Electricity and Magnetism, in the cure of disease", 1847.

"There is an old oriental story which runs something like this:

A traveller met the Plague outside the gates of Baghdad.

"What were you doing in the city?" asked the traveler."
I killed a thousand", replied the Plague, "but Fear killed ten thousand more."

In the widespread epidemic of influenza which occurred during the war, it was noted that the disease and its resulting mortality were far lower in New York than in many other cities.

The New York City health authorities attributed this result largely to the fact that they requested the newspapers to minimize the printing of news about the epidemic.

In many other cities the local newspapers were crowded with influenza items.

This caused the minds of the readers of those papers to dwell excessively upon influenza, to more greatly fear it, and to entertain a more lively expectation of actually getting it.

The evidence indicates that this set up autosuggestion with the result that the trouble was far more prevalent than it would have been if influenza news had not been so widely disseminated.

After the epidemic was over, national statistics were gathered regarding the mortality under varying forms of treatment.

It is said on good authority that the mortality under non-medical treatment was far lower than where medicine was used.

It is a fact that many medical students have to give up their studies simply because they are so influenced by their reading of symptoms of various diseases that they reproduce these same diseases in their own bodies through imagination and unconscious autosuggestion.

A man who for many years had manufactured and marketed patent medicines, publicly stated several years ago that a mild epidemic frequently followed the appearance of his advertising in the newspapers.

Many who read these advertisements, through unconscious autosuggestion, reproduced the symptoms described.

In war it has been noted that the wounds of the victorious soldiers heal more quickly than the wounds of the soldiers on the defeated side.

The only possible explanation is that the minds of the victors are uplifted and happy while the vanquished are depressed.

We possess within us a force of incalculable power.

If we direct it in a conscious and wise manner, it gives us the mastery of ourselves and allows us not only to escape, from physical and mental ills, but also to live in relative happiness, whatever the conditions in which we may find ourselves." - Dr Emile Coué, MD, in "Self Mastery through Conscious Autosuggestion", 1912.

The Value and Usefulness of Psycho-Therapeutics

"1. The paper exposes some theoretic views; **results of 5 years of practical experience, in the Clinique of Doctors van Renterghem, and van Eeden in Amsterdam**, a statistical report of which was read in Paris in 1889 (Congrès d'Hypnologie).

2. **The term Psycho-Therapeutics (introduced by Hack Tuke), is defined as the cure of the body by means of the psychical functions of the sufferers. Suggestion as the impulse of one mind to another, the principal aid of Psycho-Therapy.**

3. The name Hypnotism must be avoided as being the continual source of misunderstanding and distrust. Hypnotism is pathological, or experimental, the suggested therapeutic sleep is or ought to be physiological and normal.

4. Psycho-Therapy, as the cure of the body by the mind, is the soundest, most useful and most harmless principle in the world. The distrust and prejudice caused by the abnormal facts of hypnotism, in experiments and public exhibitions, is its greatest enemy. Only by the strictest integrity of purpose can it stand its ground.

5. All experiments must be avoided, as experiments can become the cause of permanent abnormal conditions, heightened suggestibility, doubled or multiplied states of consciousness.

6. Heightened suggestibility is an abnormal condition, and must be strictly avoided. Suggestibility depends on ataxia or disintegration of the psyche, which theoretically lessens the power of resistance.

7. To cure by suggestion without increasing suggestibility is not impossible. It can be realised by addressing suggestion to intellect and conscious volition of the sufferer.

8. Centralisation of psychical functions must be the principal maxim of Psycho-Therapy - the Centrum being intellect and conscious volition.

9. Difference between the lower and upper class of society. The latter much more difficult to treat. They object, rightly, to a tone of command. **Psycho-Therapy must guide and instruct, not command.**

10. The suggestibility as defined by French authors consists of 2 parts:
A. Ideoplastic power.
B. Impressionability.

These 2 do not go invariably together; A can be increased without increasing B.

11. The ideal is:
1. Great ideo-plastic power.
2. Great centralisation of psyche.
3. Slight impressionability.

12. The possibility of curing disease, even organic, by the ideoplastic power is amply demonstrated by many observations. This power can be brought and ought to be brought as much as possible under the influence of conscious volition.

13. The best way to this is training. Psycho-Therapy especially in nervous and chronic disease must be a system of training.

14. The remark is ridiculous that Psycho-Therapy does not heal wholly and lastingly. **The cure by chemical means can never be as profound and lasting as the cure by means of the individual will. For the first is artificial, abnormal and lessens the normal power of resistance. When the individual will, only guided by a helper, effects the cure**, the chances for relapse are least.

15. Difference between psychical and physical, is not spiritual and material. Natural science deals with the phenomenal world, as philosophy with the spiritual. Spirit is not subtilised matter. **Psychical forces are new, unknown forces, special attributes of living matter.**

16. Virchow's cellular-pathology neglected the psychical forces of the living cell. Now that these are again acknowledged, some principles of the old Vitalism must necessarily revive.

17. The "Vis medicatrix naturae" (healing power of nature) represents a real and very important power, whose existence and importance are not always sufficiently acknowledged. This power will diminish by inactivity according to the physiological law.

18. Chemical Medicaments stimulate this power without strengthening it. Modern Medicine, especially in chronic diseases, by neglecting psychology is on the way to weaken the individual and the race, striving more after temporary and artificial cures, than after a permanent revival and increasing of the normal power of resistance, by exercise, training and strengthening of the will.

19. Psycho-Therapy (if well understood), is a strong and most fruitful correction of this error.

20. These views are in large part thoroughly proved by practical experience.

Hydro-Therapy, Electro-Therapy, may each of them suffice in certain cases to incite the brain to the effort of inhibition or of dynamogeny (the production of nervous energy - stimulation of the nerves) necessary for the cure.

In part, they act by suggestion." - Dr Frederik van Eeden, MD, in "The Theory of Psycho-Therapeutics", 1892

The Drift Towards Nature Curing

"Back of and penetrating through all nature, there exists infinite intelligence, or mind.

Indeed, we all live, move, have our being in, and are a part of a thinking universe.

Everything is a manifestation of this cosmiosentient energy.

The human entity ceaselessly receives this energy in the air, the ether, the water, the light, the food, and in other ways.

It is for us to transmute this elemental life into healthy tissue, blood, bone, and muscle.

It is for our wisdom to build it also into our mental machinery and to evolve sequentially a congeries of faculties constituting a microcosm, indeed, one that shall be perfectly correlated to the macrocosm - the greater world without.

It is self-evident that mind must exist in nature, else it could not become manifest in man. Something never comes from nothing.

The lack or the imperfect adjustment either of body or of mind at any stage of our physical or mental evolution is certain to result in disease.

Perfect adjustment must, logically, result in perfect health.

This supreme subconscious mind of nature without, constituting the microcosm, is the perfection of health as well as of wisdom, will, and love. It is the ruler in its own domain.

All disease, then, of the body or the mind is abnormal and is due to our limitation of knowledge.

It results in the mind having lost partial or complete control of some of its bodily functions.

Philosophy says that the tendency of all nature is toward perfection both of function and of manifestation of function in form.

Mental and physical efficiency is normal. Inefficiency is abnormal and wrong. The human body is a machine which the man within must learn how to manage. It is a laboratory designed to manufacture and to distribute properly all the serums and secretions it requires for perfect functioning.

It can meet and master any emergency when given a chance.

When man comes into the consciousness of this great truth and acts upon it, he will maintain both mental and physical efficiency.

When such ecclesiastical facts as alluded to shall become more widely known, a better religious and ethical adjustment is sure to follow.

In medical nihilism and preventive measures (for, all negations are but stepping-stones to affirmations), **Dr Wm. Osler, seems to be in the lead in the profession proper.**

He says: "The new school does not feel itself under obligations to give any medicine whatever."

Many others from all the medical schools might be quoted in substantiation of this statement.

Yale, Harvard, Johns Hopkins, besides several other medical colleges, have chairs of suggestive therapeutics or applied psychology.

The Weltmer school of suggestotherapy has grown in 19 years to enormous proportions. It has treated 1 million patients with success in all but 3% of its cases. The Supreme Court of the United States, in 1902, in deciding in favour of that cult's drugless methods, pronounced them "sound and practical, legitimate and lawful."

From Osteopathy, Christian Science, The Unity School, and other naturalistic cults, similar testimony might be produced, if space permitted." - Dr S. J. Bronson, MD, Fort Worth, Texas, in "Clinical Medicine", March 1919.

Methods of Treatment in Neuroses & Psychoses

"By Stress, we mean all of the forces which act upon the individual organism and its constituent cells; this may be either physical or psychic, and therefore includes Various Toxic and Metabolic Disturbances, the wear and tear of life, mechanical work and intellectual effort, or a nutritional disturbance.

Every experience which produces the painful effects of Fear, Anxiety, Shame or of Psychic Pain, may act as an exciting cause.

Whether an experience becomes important naturally depends on the person affected; as in the Traumatic Neuroses, the active etiologic factor is really not the insignificant bodily injury, but **the effect of the fright; that is the psychic trauma.**

Notwithstanding the inherited predisposition**, an exciting cause is necessary.**

As our knowledge of the chemistry of disease grows and as we examine patients with greater and greater thoroughness, **we find a large number of cases manifesting either a Toxic, or a Nutritional Disturbance.**

Much, however, may be done for t**he predisposed neurotic child by encouraging a wholesome, social environment and teaching him to observe all the rules of Hygienic Living; especially should he get the proper amount of sleep in the open air or in a well-ventilated room.**

The Nutrition should be looked after by giving a liberal Wholesome Diet.

The education and training are important; he should be taught what responsibilities to assume and what to decline; what he can do and what to avoid.

Nothing should be permitted to interfere with proper development.

For those more seriously ill; Proper Nursing, Feeding (Proper Diet), Massage, Rest (Relaxation), Baths and Electricity. Massage takes the place of exercise of the bed patient. It increases the peripheral capillary circulation and gives the muscles work without causing fatigue.

Hydrotherapy and Electricity should be used as indicated.

The Rest treatment may be carried out in detail or modified according to the indications in each individual case.

All possible causes of external irritations should be removed.

Ocular disturbances should be remedied, etc.

Proper attention should be paid to Elimination.

The bowels should be kept open and the kidneys active by the free use of water, or if necessary, cascara at bed-time or salines before breakfast may be given advantageously. If a warm bath at night or Massage at night followed by a glass of hot milk does not secure sleep, Trional, Sulphonal or Veronal may be administered in some hot milk. The Psychic Side should not be neglected but each case should be analyzed, warped views and obsessions straightened out and explained by logic, persuasion and encouragement. Those who have much to do with organic functional Neuroses and Psychoses are familiar with the wonderful influence they are able to exert over the Mental Attitude of those afflicted by kindness, patience, firmness, interest and sympathy. Everything said and done, if rightly said and done, conveys a suggestion, inspires hopefulness and increases the efficiency of other methods of treatment; points out the way to health, and a new lease on life.” - Dr Elmer L. Crouch, MD in “Some Borderland Psychoneuroses”, Illinois Medical Journal, August 1910.

Cerebral Affections: The Symptoms of Diseases Seated in Other Organs than the Brain

“It is, of the greatest importance, whenever we observe any symptom which indicates an alteration in the functions of the Brain, not to allow ourselves to be imposed upon by the absence of pain. We must then Investigate with so much the Greater Attention the Other Phenomena, which, being independent of sensibility and volition, do not vary with the State of the Brain. These proper symptoms, are so much the more precious, that, if Alterations of the Brain Mask, so to speak, certain Inflammations of the Stomach, by causing the disappearance of the pain, it also happens very frequently, by a singular sort of compensation, as it were, that certain Cerebral Affections produce Sympathetically Nausea, and Obstinate Vomiting, which might be regarded as Symptoms of Inflammation of the Stomach.

These Considerations on the Perception of Pain apply to All Inflammations complicated with Cerebral Affection. The Influence of Delirium in concealing the symptoms of diseases seated in other organs than the brain, must be explained upon the same principles. In reference to a case of Fever in which, as appeared on examination after death, there occurred Perforation of the Small Intestine, followed by Inflammation of the Serous Membrane of the Abdomen, but in which the usual symptoms of these morbid conditions did not manifest themselves. M. Louis takes occasion to observe, that: "The most formidable symptoms are usually so completely masked by Delirium, that as soon as it declares itself, the diagnosis of diseases that are most easily recognised becomes difficult, and sometimes even impossible." (Recherches Anatom. Pathologiques, p.187)." - in "Practice of Physic", The Encyclopaedia Britannica, 1842.

The Effects of Emotional States on Metabolism

> ***"We will also concede that Emotional Disturbances do have a Serious Effect Upon the Metabolism of the individual, possibly Through the Disturbances of the Endocrine System."*** *- Dr Henry A. Cotton, MD, Medical Director, State Hospital, Trenton, New Jersey, USA, Lecturer in Psycho-Pathology, Princeton University, in "The Journal of Mental Science", 1923.*

Gastro-Intestinal Reaction to the Emotions

The Role of the Vegetative System

"In a series of studies made on 300 women patients with Psychoses.

I was confronted with the problem of a search for causes to explain the results of normal or increased Gastro-intestinal function found in many of the depressed patients. These conclusions will be found to agree with the physiologic conception of those writers, who stress the primary importance of the Neurovegetative (the innervation of the internal organs by the autonomic (visceral motor) nervous system), and Endocrine Systems in the determination not only of highly Complex Emotional States, but of Disordered Visceral Function as well.

Emotion

In MacCurdy phraseology (Psychology of Emotions, Morbid and Normal, 1925), a complete emotion is a combination of subjective affect and objective emotional expression:

1. Gestures
2. Postures

3. Facial Movements
4. Vocal Expression and Modulation
5. Many Visceral Changes

Affectivity, according to MacCurdy, is the determining element in our acts and omissions, directing our attention as well as our whole behaviour, and determining the direction of our endeavours; while logic and judgment seem only the servants that show the way to the goal, and furnish the necessary apparatus.

The affective faculties represent the emotional propensities peculiar to man.

Affectivity, when unusually responsive, and **in the presence of defective reflective power, causes by its exaggerated action morbid syndromes as seen in the psychoses.**

McDougal divides **Emotions into Primary, Secondary and Derived.**

1. Primary Emotions: Owe their specific qualities largely to the visceral sense impressions made by the bodily adjustments that accompany instinctive strivings.

2. Secondary Emotions: Are made up of blended primary emotions, which, in turn, are made up of two or more instinctive impulses excited simultaneously.

3. Derived Emotions: or feelings arise in the course of the operation of any strong impulse or tendency, the emotion being dependent on or derived from the working of the impulse taking the form of desire. These emotions arise only in the course of actively prompted and sustained desire. In short, the derived emotions are affections and feelings, in the strict sense of the word, resulting from fundamental feelings of pleasure or pain and accompanied by developed powers of imagination and an intellectual capacity to conjoin pleasure with pain.

Moods

An emotion normally subsides into a mood before the excitement wholly passes away. Mood is the persistent emotion prolonged after any thought of the object.

Persistent moods may become morbid, as in the affective states of the neurotic and the psychotic. Moods, by their repetition of corresponding conceptions, sustain the affect at the expense of effect on somatic and visceral expression until a level is reached at which there is an entire absence of reaction at the lower level. (Lodholz, "Fear; Its Beneficial and Harmful Effects on Body Function", International Clinics, 1925) **Some Moods Are Largely Due to Organic Conditions, which in chemical and in other ways predispose the subject to this or that kind of emotional excitement. In cases of long persistent morbid moods one naturally suspects the presence of an organic factor** (McDougal, "Outline of Psychology", 1923), as in the affectful ideas of the manic-depressive patient.

As Jackson describes him:

> ***"The manic-depressive swings from pole to pole in his thinking as the chemistry of the body, acting through the vegetative system upon brain and other viscera, gives him the feeling of exaltation and then the awful torture of depression."***

Bleuler in "Text Book of Psychiatry", 1924, said:

> ***"In all mental diseases the symptoms are largely an expression of the affective condition. Congenital anomalies, injuries and diseases of the brain, disturbances of nutrition, intoxications and infections, plus the prolonged action of affects form, in varied array and admixture, the basis upon which psychopathic reactions occur."***

Vegetative System

The pathway for emotional reaction on visceral function is the vegetative system.

This comprises the neurovegative system (also called the autonomic or involuntary nervous system), and the endocrine system.

The endocrine glands appeared before the out-budding of the involuntary nervous system, regulating body metabolism by hormonal control.

Later, these 2 great divisions joined under 1 system to regulate and maintain particularly all visceral function of:

1. **Tone**
2. **Motility**
3. **Glandular Activity**
4. **Sensitivity**
5. **Absorption**

Vegetative Nerve System

The central grey matter, or midbrain, which surrounds the 3rd ventricle, or hollow space of the primary anterior vesicle of the brain is, according to Friedrich Von Müller, in "Anatomy of the Brain from a Clinical Point of View", American Journal Medical Science, January 1928, supposed to be **the seat of the elementary vital and vegetative functions of life.**

On both sides of the third ventricle lies the optic thalamus, the old important centre of the whole sensibility.

In the medulla or bulb, the enlarged portion of the cord, at its junction with the midbrain or mesencephalon, is localized the important centres of respiration and circulation.

It is by outgrowth from the midbrain, and medulla and the neural crest of the embryonal brain stem that the vegetative nervous system developed, to form 3 distinct groups of neurons:

1. with its origin in the midbrain and bulb;
2. from the neural crest to form the lateral ganglia, connected with the thoracic and upper lumbar segments of the cord, and a
3. in the sacral segments of the cord.

The middle group is called the sympathetic nerves; the remaining 2, the parasympathetic. The 3rd, 7th, 9th and 10th cranial nerves and the pelvic nerve (nervus erigens) form the latter division of the system. **The vegetative nervous system remains connected by afferent and efferent fibres with the Central Nervous System, so that one may affect the other.** Moreover, a number of specialized vegetative nerve cells remain within the cerebrospinal axis, thereby accounting for the occurrence of vegetative phenomena in certain diseases of the brain.

Parasympathetic and Sympathetic Nerves

The vagosacral fibers, or parasympathetic nerves, when stimulated, increase visceral motor and secretory activity. The sympathetic nerves inhibit visceral function, except to some structures like the pilomotor muscles, sweat glands, most of the blood vessels, fallopian tubes, uterus, vagina, vas deferens and seminal vesicles and ureters, to which no parasympathetic fibers travel; here the sympathetic nerves may either increase or inhibit motor or secretory activity. With attention directed in the present study to the gastro-intestinal tract, the vagosacral fibers running to the intestine end in ganglions in the muscle coats and mucus, the plexuses of Auerbach and Meissner, respectively. The sympathetic or splanchnic nerves originate in the thoracolumbar region of the spinal cord with their cell stations in the lateral ganglions on each side of the vertebral column, and also in the collateral ganglions grouped to form especially the celiac or solar plexus and the inferior mesenteric plexus. The sympathetic nerves are connected by white and grey rami to the spinal nerves of the voluntary nervous system, supplying the skin and muscles of the torso and extremities. The parasympathetic nerves are connected to certain of the cranial nerves, but especially to the fifth or trigeminal.

The two systems are assumed to be in a state of equilibrium, similar to that in an alternating current, of stimulation and inhibition.

An excitability of the vagosacral side is called vagotonia; of the sympathetic, sympathicotonia. An atony or paralysis of one side will cause a relative tonicity of the other side.

Vagotonia

The Vagotonic type of person is reserved and cold-blooded, and has a slow pulse, hypotension, contracted pupil, deep, closely set eyes, a cool pale skin which sweats easily and patchily and clammy hands and feet.

He is subject to: Hyperchlorhydria, Spastic Colon; Low Blood Sugar, Hyperinsulinemia; Calcium Deficiency; Chronic anaphylactic states, Hay-fever, Asthma, Angioneurotic Edema, Urticaria; Migraine and Epilepsy and Vertigo.

Sympathicotonia

The Sympathicotonic person is lively and excitable, with a rapid heart rate, hypertension, dilated pupils, rosy colour, warm dry skin and prominent eyes; he has a high blood sugar.

He tends to suffer from: Slow Digestion and Atonic Constipation due to stasis, Spasm of various sphincters, Eczema, Pruritus, Hyperesthesias, myalgias and Pains over the main arterial trunks.

The appearance of many such persons suggests hyperthyroidism.

There is a deficiency of magnesium.

The sympathetic nervous system with its connections with the thyroid and suprarenal glands, liver, brain, skeletal muscles and cardiovascular system is stimulated by fear, anger, shock or pain to form the mechanism of defence, attack or flight; and of the conservation of visceral function by inhibition.

Endocrine System

The inter-relationship between the various endocrine glands, and the effects of their hypersécrétion or hyposecretion on the body generally, are being worked out in many laboratories. Established facts are still comparatively few, except for the action of a single gland on bodily functions of growth, nutrition, resistance to disease, metabolism, procreation and vascular tonus. These effects may be brought about by action on the vegetative nervous system, direct or indirect chemical action, or by a combination of nervous and chemical stimuli. **The Endocrine Glands play an all important rôle.**

This is seen not only in the evolution and growth of the organism as a whole, but in the regulation of the functioning of its various component parts, which, when exercised in a normal manner, conserves the constitution of the body, nourishes the activity of vital processes and, by providing a self-regulating mechanism for the body, sets the voluntary nervous system free for the execution of its essential function, namely, volitional response to changes in the environment. **Any disturbance in the balance of the neurovégétative system, unless compensated, causes a disturbed equilibrium in the endocrine system, and any uncompensated endocrine imbalance is reflected in the vegetative nerves.**

Equilibrium in vegetative structures, however, depends very much on the colloidal complex of the cell and its contents in ions, for nerve impulses and chemical substances circulating in the blood and tissue juices produce different effects, depending on the difference of the chemical and physical condition of the cell. (Pottenger, Symptoms of Visceral Disease, 1925)

Digestive Function

Secretion

According to A. C. Ivy in "Contribution to the Physiology of the Stomach", JAMA, 19 September 1925, gastric secretion can be divided into 3 Phases with reference to cause:

1. The cephalic phase, caused by:

a) Reflexes through the cerebrum (psychic), and by
b) Reflexes through the thalamus, midbrain and medulla, excited by sight, taste and smell of food in the presence of appetite;

2. The gastric phase, caused by:

a) Mechanical distention of the stomach,
b) The action on or by way of the gastric mucosa of substances in the food;

3) The intestinal phase, caused by the action on or by way of the intestinal mucosa of substances in the food or resulting de novo from digestion.

Meat is the only food thus far studied that contains a substance that stimulates on contact with the gastric mucosa.

A humoral mechanism is concerned with gastric digestion.

Psychic Secretion

The vagi are the efferent nerves concerned in conducting the impulses from the gastric secretory center or centers to the gastric glands.

The afferent nerves carry sensations of sight, taste and smell to the centers; the act of chewing and swallowing probably plays the rôle of decreasing the threshold of the reflex arc concerned.

Busik in "Secretory Function and Motility of the Stomach in Brain Diseases", Russk. Klin., September 1926, found that irritation of the secretory center from increased intracranial pressure due to tumour of the brain caused increase in gastric acidity, and that involvement of the same center in the degenerative process of epidemic encephalitis caused a reduction in gastric acidity.

Gastric motility was unaffected in both types of patients.

Pavlov in **"Work of the Digestive Glands", 1902, expressed the belief that the vagal stimulation is the predominant contribution to acid secretion through both digestive and interdigestive phases.** In vagotonia, there is a continuous hypersécrétion of highly acid juice through the fasting and digestive phases.

Hunger and Thirst

These are Feelings that result from Visceral Sensations, and instinctive motives arising to consciousness in the cerebral centres of hunger and thirst, and which are aroused by association centres of sight, taste and smell. When intensified by a craving to gratification, the same sensations and instinctive motives stimulate secretory and motor centres, which send specific nervous impulses through the vagi to the musculature and glandular structures of the intestine (Hollander in "Search of the Soul and Mechanism of Thought, Emotion, and Conduct", 1920). **As local conditions of the stomach, may destroy or increase the feeling of hunger or thirst, so central irritation or disease may give rise to a ravenous appetite or thirst or to a complete loss of the same.**

Gluttony may be associated with disorder and disease of the gastro-intestinal tract, and anorexia with increased visceral function.

Thirst is characteristic of disorders of the Pancreas and Pituitary Gland.

Injection of food into the colon, the nutritive enema, appears to satisfy hunger or thirst through nervous pathways before sufficient absorption can possibly take place. Carlson and Litt in "Studies on the Visceral Nervous System on the Reflex Control of Pylorus", Arch. Int. Med., March 1924, found hunger contractions of the stomach dependent on a deficiency of dextrose in the blood serum, and L. R. Müller in "Das vegetative Nervensystem", 1920, that hunger and thirst may be produced when the amount of protein in the blood serum sinks as low as found in patients with severe inanition (exhaustion caused by lack of nourishment). **Hunger and thirst can be excited by posthypnotic suggestion.**

Healthy subjects who have just eaten a hearty meal can be made to feel fresh hunger and go through another meal. Further, it is possible to satisfy the hunger and thirst of subjects in deep hypnosis by merely suggested food and drink.

Anorexia

Refusal to Eat, is the Most Important Etiologic Factor following Emotional Upsets, with digestive symptoms following.

This is called primary Mental Anorexia, and consists in the progressive loss of the mental representation of appetite (Dejerine). Loss of appetite has been induced by suggestion to such an extent and for so long a period that the person concerned refused solid food for 14 days. By autosuggestion the psychotic patient sometimes refuses to take nourishment from a great variety of motives, according to the form of the psychosis.

A patient may be immersed in his thoughts so that the sensation of hunger is deadened; he may refuse it because he fears it is poisoned, because a voice told him he must not touch it or because he is too great a sinner.

In each instance there is the same symptom of suppression or perversion of the sensation, associated with different motives.

Motility

The Gastro-intestinal tract is essentially an automatic organ like the heart.

Auerbach's plexus, ganglions lying between the longitudinal and circular muscle coats, is the intrinsic nervous mechanism that originates the power of tonus, rhythmicity and irritability.

However, motility of this type would be functionally inadequate in the absence of control of the central nervous system by way of the vago sympathetic system.

The latter converts an inherent mechanical regularity into a modulated and extremely variable activity of rhythm, tone and amplitude of contractions, **adapting Gastro-intestinal functional responses to the constantly changing Nervous and Chemical activities in the body as a whole** (Thomas, and Kuntz, in "A Study of Gastro-Intestinal Motility in Relation to the Enteric Nervous System", Am. J. Physiol., May 1926).

The intrinsic or Enteral Neuromuscular System is affected by acute and chronic debilitating, depressed nutritional and asthenic states, by chemical disorders, by disorders of the Endocrine System, and by drug reactions.

Tonus

Gastro-intestinal tone is dependent on both Nervous and Chemical Factors (Pottenger in "Symptoms of Visceral Disease", 1925).

As long as the Muscle is in continuity with the Nerve Cell which Nourishes its Nerve, the action of that Nerve Cell keeps the Muscle in a condition of tone.

Certain chemical substances, especially the Salts of Sodium, maintain the continuity of the Muscle with the Nerve Cell.

Sympathetic (inhibitory) activity is enhanced by the presence of Calcium and Parathyroid; Parasympathetic or Vagosacral activity by Potassium, Sodium and Magnesium.

Normal activity of rhythm and tone requires definite relative amounts of these important Ions.

Vascular Tonus

The Splanchnic Vessels supply the Abdominal and Pelvic Viscera.

They are of greatest importance in the maintenance of blood pressure and in the circulation of the blood. The splanchnic vessels are the storehouse for surplus blood when not required by body activity.

When special activity on the part of any organ is required, the splanchnic (sympathetic) nerves by local overstimulation produce a vasodilatation by paralysis of the blood vessels of that organ, during the stage of its activity, thus increasing motor and secretory function.

The splanchnic nerves may likewise, by sympathetic inhibition, cause an increase in vasomotor tone of the splanchnic vessels to produce a decrease in motility and secretion, locally or through the entire alimentary tract (W. Kerppela, in "Vaso-Motor and Nervous Factors in Nervous Disease", Arch. f. Verd. Krank., June 1926)

A spastic condition of the capillary bed in the gastric mucosa causes a temporary achylia; a paralytic vasodilatation causes a hypersécrétion of acid and mucus.

Krogh has shown that the vascular bed in a muscle in activity contains 30 times the quantity of blood found in the same muscle when inactive.

Adrenaline

Adrenaline when poured into the blood in small quantities, causes by its peripheral effects constriction of the vessels of the skin, the mucous membranes and the abdominal organs, driving the blood into the vessels supplying the skeletal muscles; the vessels become actively dilated for its reception through the effect on the mechanisms of the sympathetic and dorsal root ganglions (Pottenger in "Symptoms of Visceral Disease", 1925).

But as the quantity of liberated Adrenaline accumulates, the peripheral effect begins to overcome the ganglionic effect in the skeletal muscles, the intestinal or splanchnic vessels by increased action of the collateral sympathetic ganglions (solar plexus), and the inferior mesenteric plexus begins to dilate and the blood is reversed in its path.

Claude in "Contribution to the Physiology of the Stomach", JAMA, 19 September 1925, research on the vegetative system in 600 patients with psychoses brought him to the following conclusion:

> ***"The intensity and rapidity of morbid periods in the psychoses seem to be proportionate to the excitability of the vegetative system, probably through the intermediation of the humoral or endocrine mechanism. It is not astonishing, therefore, if a characteristic state of the Neurovegetative System is to be found constantly in the organic symptomatology of certain psychoses."*** *- Dr C. W. Lueders, MD, in "Archives of Internal Medicine", August 1928.*

Finally, how reasonable it is to agree with Müller that the vital energy of the whole man is localized in the vegetative system!

"The Functions of our Body, and Soul, lie more than we formerly believed in the mysterious field of the unconscious.

In Acute Diseases, one of the first symptoms is loss of appetite, of the impulse to maintain our body.

And in severe diseases the whole impulse for preservation of life may be entirely lost.

The diseased state of the whole body has influenced the mentality.

Our Organs, our Glands, our Whole Body Influences our Mind.

The Psychical Processes are Not Localized in the Brain Cortex.

Life and Soul Are a Function of the Whole Organism." - Friedrich Von Müller, in "Anatomy of the Brain from a Clinical Point of View", American Journal Medical Science, January 1928.

The Essence of Each Individual - Its found to be composed of Spirit and Soul: its Spirit being its portion of the Creator; its Soul that of its entity itself, making itself individual, separate entity, that may be one With the Creative Force from which it comes, or which it is, of which it is made up, in its atomic forces, or in its very essence, itself emanates. And the more this may be manifest, the greater becomes the unseen forces of life.

The Nature of the Hypnosis

True Hypnosis, there is only one. Subjugating of the physical consciousness for the interpreting of the obsession.

Thoughts Are Things

"The cloud chamber experiment, which is described in detail in "Science of Mind", July 1974, was the most dramatic of the tests with the Healing Energies.

The cloud chamber is a glass cylinder which has an aluminium bottom and a viewing glass across the top. When methyl alcohol is placed in the chamber and the entire unit is positioned on a flat block of dry ice, a zone of alcohol mist is created in the chamber. High-energy atomic particles generate vapour trails when they pass through the sensitive zone. By holding her hands around the unit as if it were a patient undergoing treatment, Mrs Worrall was able to produce a moving wave pattern inside the chamber. Several weeks later, from a distance of 1,000 kilometres, she again caused a wave motion to develop within the chamber. The results of these experiments indicate that: "Thoughts are Things", and visible manifestations in the physical world can be produced mentally from a distance." - in "The Energies of Spiritual Healing", Science of Mind, January-February 1976.

Chapter 25

Bile Stasis Its Effects on Jaundice And Gallstones

"Definition: Jaundice, "per se", **is Not A Disease, But A Symptom Complex,** characterized by a yellow pigmentation of the skin, mucous membranes and sclerae as a result of the deposition of bilirubin and biliverdin in the tissues which causes a deficiency of bile pigment in the waste products of digestion.

The stools are colorless, and there is a greenish or greenish-yellow discoloration of the urine.

Clinically, jaundice is found in conditions in which the biliary secretion or excretion is interfered with, and is always preceded by an increase of bilirubin in the blood stream.

When viewed in broad daylight, slight forms of jaundice are observed first in the sclerae and in the skin of the face.

The first, appearance of bilirubin in the urine may precede or follow the pigmentation of the skin. In mild cases, bilirubin may be absent from the urine.

Bile salts are present in the urine in obstructive jaundice and in the type due to hepatic injury, but are always absent in hemolytic jaundice.

The coagulation time of the blood is much increased in jaundice, from the normal 3 or 4 minutes to 10 or 12 minutes, or longer, a fact of much importance when surgical operations in jaundiced patients are under consideration.

In protracted and severe cases, **there is a marked tendency to subcutaneous, submucous, and subserous hemorrhages.**

This condition is due to the presence of bile pigments in the blood and these pigments unite with the available calcium in the blood stream, and thus prevent coagulation.

The inspissation of the bile, as indicated by the pigment content, is at its greatest after 1 day or 2 of stasis.

Pathology of Jaundice

The mechanism of jaundice due to gross obstruction of the extrahepatic bile ducts, or less marked obstruction of the larger intrahepatic ducts, is readily comprehended.

On the one hand, the outflow of bile into the duodenum is hindered; on the other, the hepatic cells, if normal, even after the common bile duct has been completely occluded, continue to secrete bile (although perhaps a lesser amount).

In consequence of the obstructed outflow and of its continued production, bile accumulates within the biliary tract, the pressure increases, and the biliary ducts become dilated.

It was demonstrated by Eppinger that this **dilatation extends to the finest biliary capillaries, which become enormously distended, especially at the points of communication of the capillaries of adjacent rows of liver cells.**

Furthermore, **evidences of the increased pressure are seen in the intercellular biliary capillaries, which become lengthened in the direction of their distal end, dilate ampulla-like, gradually approach and finally rupture into the lymph spaces between the hepatic cells and the blood vessels; from there the biliary constituents reach the blood vessels via the thoracic duct.**

One pathway of the bile to the blood vessels is through the lymphatics and the thoracic duct.

Obstructive Forms of Jaundice

Foreign bodies or inflammation or compression of the bile ducts may impede the flow of bile. Among the foreign bodies, gallstones rank first.

They are usually arrested just in front of the papilla of Vater, where they may cause a ball-valve condition, **or induce inflammation leading to Complete Obstruction.**

As the inflammation of the papilla may spread to the common bile duct and give rise to chronic cholangitis, so may the catarrhal process in like manner extend into Wirsung's duct, and set up Acute or Chronic Pancreatitis, which may justly be regarded as possible complications or sequelae of catarrhal jaundice.

Tumors, Echinococcus Cysts, Distoma, and Ascarides may cause Mechanical Occlusion.

Occasionally coagulated blood and mucous cores are the offending agents.

There may be tumors situated either in the common duct itself, or compressing its lumen from the outside.

This happens in the presence of carcinoma of the head of the pancreas, the common bile duct, the gall bladder, and the portal lymph glands, and also as a result of tuberculous or syphilitic enlargements.

Tumors of the right kidney, omentum, fecal masses in the colon, a pregnant uterus, ovarian tumors or enlarged glands may all injure the bile duets by compression.

Inflammatory processes or slight peritoneal adhesions in the neighbourhood of the portal vein may have a direct influence.

Jaundice associated with the specific fevers may be Toxemic in character, or may be due to the general systemic infection.

Symptomatology

Jaundice commonly follows an Acute Respiratory Infection by 5 to 14 days or **it may be preceded by gastrointestinal symptoms, such as:**

1. **Furred Tongue**
2. **Anorexia**
3. **Nausea**
4. **Vomiting**
5. **Foul Breath**
6. **Headache**
7. **Vertigo**
8. **Dyspepsia**
9. **Bitter taste**
10. **Etc...**

These symptoms generally last but a few days, often disappearing by the time jaundice appears.

They may be accompanied by a temperature of 38° C. to 40° C.

Frequently there is diarrhea from extension of the catarrh to the intestine.

Before jaundice is observed the stools become clay-colored and extremely offensive from fermentation.

Even before the icteric tint appears in the conjunctivae and skin, bile acids and bile pigment may often be detected in the urine, the latter revealing itself in the yellow foam that appears on shaking.

Duration

Jaundice gradually disappears in 2 to 6 weeks, the urine and stool gradually resume their normal colour.

Treatment of Catarrhal Jaundice

Considering that catarrhal jaundice is principally due to gastrointestinal catarrh, the therapy will have to be directed chiefly to the latter and dietetic measures adopted accordingly.

The patient should be kept warm in bed, and hot cataplasms applied to the hepatic region. The gastric irritation may be allayed by draughts of warm water containing Bicarbonate of Soda.The bowels should be kept open by enemata.

The Diet should be absolutely free from irritating constituents. As to fats, none but olive oil, or milk are to be allowed. When the gastrointestinal catarrh has subsided, the bland milk diet should be relaxed, and clear soup, fish, white and tender meats (chicken, squab, sweetbread, beef juice) may be given in small quantities as the patient's condition permits.

Pancreatic preparations may be indicated as adjuvant treatment.

Vegetables are allowed in puree form and finely divided.

Meals should be small, but frequent Rectal Injections (Enemas) of cold water have been recommended to stimulate peristaltic action of the gall bladder and so to induce flushing of the bile ducts by the bile.

The unpleasant pruritus is at times relieved by ablutions with lemon juice, chloroform, spirits of menthol, or warm or alkaline baths.

If the jaundice persists in spite of the diligent application of the measures just described, and there is no reason to suspect grave underlying condition, or malignant disease, the patient will probably benefit by a visit to a spa.

Experience has shown that catarrhal jaundice is most favourably influenced by Carlsbad mineral water.

Alkaline aperients should be given during the course of the disease and may be continued during the convalescent period.

Bitter tonics are useful during the late stages of jaundice.

In cases where the bile showed bacterial invasion, K. Beckmann introduced through the duodenal tube a 5% solution of sodium carbonate t.i.d. in quantities of 50 c.c.

To avoid continuous discomfort through use of the duodenal tube, he used 5 special gelatine capsules, each holding 0.5 gm. (gr. viii) Sodium Carbonate.

The treatment was carried out in periods of 3 to 4 days, until it was shown that the bile was free from bacteria.

In a few cases with inflammatory manifestations of the bile ducts, the demonstrable germs in the bile disappeared after such treatment, as did the symptoms of the disease.

The principle upon which he based this method of treatment was the fact that when Sodium Carbonate was introduced into the duodenum, the bile became alkaline in reaction.

Gallstones

Any condition of the heart, lungs, or liver liable to produce congestion of the portal circulation should be corrected as soon as possible.

Inflammatory catarrhal conditions of the stomach or duodenum should be combated by attention to the Diet, by daily administration of Saline Laxatives; otherwise these disturbances are liable to lead to infection of the biliary passages and to conditions favouring gallstone formation.

Milk soured with lactic acid bacilli and acidophilus milk have recently been recommended in such cases for their disinfectant and stimulant effect on the intestinal tract.

Hyperchlorhydria, if present, should be treated, since it may pave the way for subsequent cholelithiasis, or, if gallstones are already present, may mask the true cause of the symptoms.

Treatment of Bile Stagnation

Stagnation Favours Infection and Cholecystitis, hence the production of gallstones; or, if gallstones are already present, a possible attack o colic may result.

In obese patients, in those who have been suffering from typhoid fever, influenza or malaria, and in cases of pregnancy, bile stagnation is particularly to be combated.

The following methods may be used:

Exercise leads to increased movements of the diaphragm and so to an increased flow of bile into the duodenum.

Olive oil: A gallstone, placed in pure oil, in 2 days lost 68% of its original weight and then broke up into small pieces.

Singer of Vienna **has related a number of instances in which the oil was administered for some time and in which the effect was marked.**

He particularly cites the case of a woman, supposedly an inoperable case of carcinoma of the gall bladder, who passed 52 large stones alter a long period of olive oil administration, after which the tumor (supposed to be carcinoma) completely disappeared.

His method of administering the oil is as follows:

Large doses of approximately 200 gm. or more of pure Olive Oil are given several times daily, unless it causes dyspeptic symptoms; if so, as large doses as can be tolerated are administered.

I he patient then takes 100 gm. of hot Carlsbad water and lies down for several hours on his right side.

For patients who cannot take oil by mouth, the duodenal tube is used, 50 to 100 gm. of hot Olive Oil being given.

Recently, a patient who had been treated, by another physician, with olive oil in large doses displayed several actual gallstones that she had passed and stated that since passing them she had no attacks whatsoever, that her appetite had increased, her dyspeptic symptoms disappeared, and that there had been a considerable gain in weight.

Rapid recoveries, however, often take place following the introduction of 200 c.c. (7 oz.) of hot olive oil into the duodenum through the duodenal tube.

This large dose relieves the pain, retards the inflammatory process, and induces biliary drainage which may favor the passage of gallstones.

Ellingwood mentions a treatment for gallstones based upon a process of relaxation and the use of olive oil as a lubricant

Massage for the purpose of forcing gallstones out of the biliary tract is injurious and therefore absolutely contraindicated.

Sometimes the drinking of 500 ml of water, as hot as it can be borne, especially if combined with the applications of hot fomentations over the liver, is useful. If cholecystitis is present, the hot bath and fomentations are contraindicated, and ice-bags over the gall bladder region are to be used instead.

Poultices may be prepared from flaxseed or boiled potatoes which have been crushed and placed in a cloth, and over the poultice a hot-water bag may be applied.

Lorand has relieved the pain effectually by the use of hot, radioactive mud packs am irradiation with the quartz lamp.

In addition, repeated use may be made of High Colonic Irrigations of 1 to 4 gallons of water, with camomile tea.

The pain can sometimes be relieved by raising the legs and lowering the abdomen.

The Trendelenburg position is often helpful, since it promotes the flow of bile.

The patient remains in bed until the pain in the gall-bladder region has disappeared.

During the first few days following the attack, mild laxatives should be prescribed. When there are no further signs of paroxysms and no other symptoms, the patient may resume his usual occupation.

Give no food or drink while vomiting persists.

After the vomiting has ceased, give a glass of half milk and half water, adding a teaspoonful of lime water or milk of magnesia.

Common Treatment of Gallstones

The conceptions of gallstone disease among the general public are varied and many remedies are used and recommended.

One of the author's patients, an old lady who has suffered from gallstones for many years, advocates the juice of radishes.

She grates the radishes, squeezes them through a cloth and drinks the juice twice daily.

She claims to have obtained wonderful results.

Another remedy highly advocated by the laity is an infusion of parsley.

H. Cameron Kidd, cites the case of a woman over 70 years of age, who had suffered for many years from gallstones.

On examination, he found a large palpable mass in the region of the gall bladder, in which gallstones could be felt.

Refusing operation, this patient began to take about 750 ml daily of a parsley infusion, and after persevering in the treatment for nearly 2 years, was apparently cured.

The fruit of parsley, and apparently also the whole plant, contain an essential oil which is fairly well known under the name of apiol and which is used as a remedy for dysmenorrhea.

Common garden parsley in combination with aromatic plants is listed as a diuretic in the French Codex.

Treatment of Gallstones

The treatment of gallstones may be considered under 3 headings:

1. **Preventive, which is largely a matter of diet, exercise and hygiene;**
2. Palliative;
3. Radical (surgery).

Treatment of Constipation Accompanying Gallstones

In Hyperacidity the administration of alkalies is beneficial.

When there is bloating of the lower intestines, Enemata containing ½ to 1 teaspoonful of turpentine and not over 1 litre of water may be given 1 to 3 times daily.

Hydropathy

Carlsbad mineral water holds the first place in the treatment of gallstones and other gall-bladder diseases. Other popular spas are Marienbad, Vichy, Neuenhar, Kissingen, and, in America, Saratoga Springs.

The waters are best taken at the springs but they may also be taken at home.

Spa treatment is particularly indicated in those who have exhibited symptoms for only a short time. In such cases the Carlsbad regimen may, by way of prophylaxis, prevent further concrement formation.

These hot mineral waters improve the circulatory conditions in the hepatic region, thereby increasing the fluidity of the bile.

The more fluid the bile, the less the likelihood of stone formation and the greater the possibility that any small existing concrements will be carried away.

The Carlsbad waters contain Glauber salts to which is ascribed their good effect.

They also contain alkalies, which protect the red corpuscles.

All the saline laxatives act in a similar manner as the mineral waters; but the saline combinations in these waters, especially in the Carlsbad water, make them particularly valuable for the treatment of gall-bladder affections.

The Treatment of Biliary Disease

Colonic Irrigation is a useful in the treatment of biliary disease, as it stimulates the circulation in the hepatic area, promoting a normal flow of the bile whereby congestion is lessened and a more liberal flow is effected.

Colonic Irrigations may be taken once a week, on a rest day between baths.

Alter Colonic Irrigation the patient should rest for 1 hour, ft is customary while the cure regimen is continued to take such irrigations every 2 weeks.

Massage carefully applied for short periods daily, is often most comforting and beneficial to the nervous and weakened patient.

Avoiding the gallbladder area is important, as it may stimulate peristalsis and attacks. During attacks large amounts of mineral water as well as plain water, to accelerate the flushing of the gall bladder, combined with hot fomentations applied to the gall-bladder area, are recommended.

Meals at short intervals are more effective in preventing biliary stagnation than meals at long intervals. Food should be taken before going to bed.

The author has found that the preparation of food is an important element and that it is very essential for the patient to really enjoy his meals without developing a phobia as to whet tier a spoonful of a certain dish is going to be good or bad for him.

Insulin has been observed to be beneficial in chronic inflammation of the gall bladder, with and without gallstones.

Cold foods and beverages, especially when iced, are to be avoided." - Dr Samuel Weiss, MD in "Diseases of the Liver, Gall Bladder, Ducts & Pancreas", 1935.

Medical Trade Drugs Effects Upon the Liver

"Toxic Jaundice: In some diseases, such as Weil's disease, Yellow fever, Pneumonia, Typhoid and Septicemia, Jaundice is of comparatively frequent occurrence, without any discoloration of the stools.

It has also been observed in cases of Cholera and Influenza.

The jaundice may be caused by the microorganisms themselves or by their toxins, leading to irritation or functional disturbance of the hepatic cells.

Disintegration of the red blood corpuscles may likewise lead to pleochromia, while catarrhal swelling may cause occlusion of the bile ducts.

The toxic effect of certain drugs may induce jaundice.

Among these drugs are arsphenamine, chlorates, pyrogallol, coal-tar derivatives, nitrobenzol, nitroglycerine, the nitrites, cinchophen, carbon tetrachloride, and dinitrophenol.

The changes in the blood are the same as are found in hemoglobinuria.

The freeing of large quantities of hemoglobin causes pleochromia and thickening of the bile, which in turn leads to obstructive jaundice.

Arsphenamine Jaundice

This type of Jaundice may be Preceded by Certain Prodromes appearing After the Administration of Arsphenamine.

Symptomatology: The symptoms, which may occur in a few days or in a month, are: **urticaria and arthritic pains, often very severe and lasting from 1 to 2 weeks; anorexia, gradual and progressive; epigastric distress or discomfort in right upper quadrant; loss of weight.** The liver is usually enlarged, and the urine bile stained; there are acholic stools and hyperbilirubinemia.

Cinchophen Jaundice

According to Motzfeld, Cinchophen and other Quinolin compounds used (commonly by the Medical Trade) in the Treatment of Rheumatism, and Gout; May Cause Severe Toxic Jaundice.

Yellow atrophy of the liver was found in some cases with fatal termination.

Atophan Jaundice

Liedberg reports that 26 out of 36 cases showed toxic disturbances following atophan therapy, while in 5 cases the causal factor was an atophan derivative, biloptin, used as a diagnostic agent in connection with cholecystography.

Digestive disturbance with vomiting preceded the icterus and in no less than 11 cases death ensued. In the 6 cases that went to autopsy acute yellow' atrophy of the liver, was found.

Dinitrophenol Jaundice

The use of dinitrophenol for weight reduction has been found harmful.

Toxic hepatitis and jaundice are frequently encountered after this drug is taken by patients either through prescription or otherwise obtained.

It is sold under various proprietary names.

The author's experience with dinitrophenol is limited to one case which he saw in consultation.

Pruritus and urticaria made their appearance simultaneously.

Two days later the attending physician noticed a slight icteric tinge of the conjunctivae, and several days later definite jaundice appeared.

Pruritus in conjunction with bradycardia is one of the most frequent symptoms in jaundice.

When pruritus with nocturnal paroxysms occurs, it becomes intolerable.

Like bradycardia, it is an inconstant symptom, and disappears at times when the disease is prolonged." - Dr Samuel Weiss, MD in "Diseases of the Liver, Gall Bladder, Ducts & Pancreas", 1935.

Paroxysmal Nocturnal Hemoglobinuria is a disorder that leads to the premature death, and impaired production of blood cells.

> ***"Thromboses, usually venous, are the most feared complications of paroxysmal nocturnal hemoglobinuria. Their etiologic importance in abdominal pain is not clear, but occasional complications such as phlebitis, hemiplegia and mesenteric infarction are clinical features, and at post-mortem examination thrombi are frequently found in mesenteric, hepatic, cerebral and other vascular channels."*** *- in "Paroxysmal Nocturnal Hemoglobinuria", New England Journal of Medicine, 31 August 1961.*

Syndrome of Bile Salt Retention

"Clinical Consequences:

Unlike the biliary pigments, which have no apparent toxic effect upon the organism, and do not seem to have a physiological role to fulfil in the intestine, **the biliary salts have a certain amount of toxicity which may be expressed clinically when they are retained, and they have a role to play in digestion which would be hindered should they not reach the intestines.**

Salt retention thus manifests itself in the course of the icteric syndrome, by signs of intoxication and by digestive disturbances." - Dr Samuel Weiss, MD in "Diseases of the Liver, Gall Bladder, Ducts & Pancreas", 1935.

Chapter 26

Concerning Stasis, A Major Factor in the Causation of Disease, And Drainage as a Factor in Resolving Disease

This Chapter concerning Stasis & Drainage appears as a need for each individual to understand **the very basic workings of all organic bodies, and their need for Drainage, and the importance to check, and the avoidance of Stasis in All Systems of the Body.**

The evils of Stasis are well documented, and are here given some glimpses of its importance, **and the ill effects that same can cause to the organic and functional body. The concept, and understanding of Drainages, was well understood by Dr Andrew Taylor Still, and others.**

In this regards, we sought both the Study, and Clinical Training upon the **Drainage of the Colon.**

Further Study, and Clinical Training was sought also upon the **Drainage of the Lymphatic System.**

Here, we understood that the entire field of Lymphatics had been neglected by the Medical Trade, but where studied by the students of Dr A.T. Still, in Osteopathy, such as Dr Frederick Payn Millard, DO, “Applied Anatomy of the Lymphatics”, 1922. We studied first the Lymphatic Drainage technique with Waldtraud Ritter Winter, who travelled to Berlin to study with Dr Vodder himself. Dr Vodder had written “Le Drainage Lymphatique, une nouvelle Méthode Thérapeutique”. This was the first publication on Manual Lymph Drainage, by Dr Emil Vodder, in Paris 1936. His work attracted many to the field of Manual Lymphatic Drainage. It was with surprise that soon after our Clinical Training upon Manual Lymphatic Drainage that we found the works from the students of Dr Still, who also had published extensively on the subject of Lymphatic Drainage.

But these early publications on the Clinical Drainage Treatment of the Lymphatics was mainly done in the United States of America, and published in the English language. It seems very probable, that those in Europe, and more so, those living in the French speaking countries had no knowledge or access to these publications. So the observational work on the lymphatics by Dr Vodder came exclusively from his Clinical experiences in private practice, while working in the south of France. Latter on, when we took our Clinical Training on Osteopathic Manipulation, and studying further the published works of Dr A.T. Still, it then that we became aware that there was a much faster way, in which to move the lymphatic system, these by using the Osteopathic Manipulation Treatments Technique for Lymphatic Drainage. This was a big game change, to learn the

Osteopathic Technique to move lymph was the simpler and faster way to make lymph circulate in the body. We had also understood, during our Clinical Training in Hydropathy, that **Hydropathic Treatments where excellent in resolving Stasis (and specially venous stasis, and colon stasis)**, and thus an amazing help to all the Emunctories, of which the Lymphatics are one of them.

Thus all Stasis, on All Systems of the Body Can Be Resolved, once one has the technical understanding on the following:

1. **Manual Lymphatic Drainage method of Dr Vodder**
2. **Osteopathic Manipulation Techniques for the Lymph**
3. **Hydropathic Treatments aimed at Lymph Circulation**

All of these Clinical Health Methods of Treatment where or great usefulness, and offering greater speedily when combined, the Clinical Method of Lymphatic Manipulation Therapy (LMT), was conceived. Some articles here also appear in the Book Emunctology, Principles and Foundations of the Emunctory System, due to its paramount importance, and to have a flow and a sequence of information in one same place, it was deemed of importance to place these brief articles here as well. Here also the Postural Drainage and Respiratory Control, Manual Techniques are also worthy, and appropriately so to be mentioned.

The Lymphatic Constitution and its Relation to Some Forms of Sudden Death

"Under the term constitutio lymphatica (status thymicolymphaticus) have rather recently been described a series of cases presenting a characteristic **hyperplasia of the lymph nodes, spleen, thymus, and often of the lymphoid marrow,** associated with hypoplasia of the heart and aorta, and frequently also with rhachitis (inflammation of part of the vertebral column). **These pathological conditions have been found especially in cases of sudden death, from a variety of causes, and are believed by many to indicate in these subjects diminished vital resistance and special liability to sudden cardiac paralysis. The importance of the constitutio lymphatica and its relation to some forms of sudden death, especially to fatalities under chloroform narcosis, have been recognized for several years by the Vienna school of pathologists, but have received very scant attention elsewhere. Two cases of sudden or unexpected death which have recently come to the writer's hands have shown in a striking degree some of the characteristic anatomical features of the lymphatic constitution,** and seem to furnish rather convincing evidence of the correctness of the views recently advanced in regard to this condition." - Dr James Ewing, AM, MD, in "The lymphatic constitution and its relation to some forms of sudden death", New York Medical Journal, 10 July 1897.

In All Parts of the Body Free Drainage Is Essential for the Cure of Infection

> *"It may be affirmed, without fear of contradiction, that* ***medicines have no absolute or specific curative power, any further than as they provoke an extra activity of one or more of the grand Emunctories or Drains: safety-valves of the system."*** *- Dr John Balbirnie, MD in "The Grounds of Non-Confidence in Drug Medication", Hydropathic aphorisms the simple treatment of disease contrasted with medicinal abuses, 1859.*

"In All Parts of the Body Free Drainage Is Essential for the Cure of Infection.
Two factors seem to inhibit this in the prostate - its Complex Glandular Structure and its location.

Hence infection tends to be chronic after it has once become involved.

The Gland Becomes Infected in 3 ways:

1. Descending infections from the upper urinary tract,
2. Infection through the urethra,
3. By the hematogenous route.

We divide chronic prostatitis clinically into 2 general classes:

Due to infection by the gonococcus, and Due to organisms such as staphylococcus, streptococcus, and others of this group. Occasionally we find the trichomonas vaginalis responsible for the infection, a few such cases having been reported in the literature. Trichomonas vaginalis is a frequent finding in the vaginal discharge of women, and is considered nonpathogenic, but often responsible for severe vaginitis and can be transmitted to the male. I have had 2 such cases of prostatic infection. The gonococcus accounts for the larger percentage of infection. Von Lockum, in his large series of cases, **reports that 74% gave a previous history of specific infection,** and 26% belonged in the non-specific group, the etiology of which was either focal or hematogenous infection.

His work agrees closely with that of Cecil, Corbus, and Redwill, who have shown the importance of focal infection, especially in the non-specific group.

Redwill and his co-workers have called attention to the Colon as a site of focal infection in:

1. Chronic Pyelitis.
2. Cystitis.
3. Prostatitis.

And reports 22 such cases which had had persistent urologic treatment over long periods without any appreciable improvement, **and that after regulation of the diet and changing of the intestinal flora by the giving of acidophilous milk, cures were produced** after other means had failed. Franke has called attention to **the relationship of the lymph channels of the right kidney capsule with the Appendix, and Cecum and believes infection of the right kidney comes about by this lymphatic arrangement. The finding of the same type of organism in the teeth and tonsils as found in the prostate,** without a previous history of gonorrhea, bears out the theory of infection by the hematogenous route.

The clinical entities usually found associated with Chronic Prostatitis, aside from the Genito-Urinary Symptoms, are the several types of:

1. **Arthritis.**
2. **Calcaneal Spurs.**
3. **Sciatica.**
4. **Muscular Pains.**
5. **Eye conditions such as Iridocyclitis.**
6. **Various Dermatoses.**
7. **Back-Ache.**
8. **Low Abdominal Pain.**
9. **Functional Gastric Complaints.**" - Dr Cyril G. Richards, MD, in "Chronic Prostatitis", Wisconsin Medical Journal, September 1933.

> ***"The Healthy State consists in the Proper Balance and Distribution of Elements; while Disease is their Derangement. All Disease Is Caused by Obstruction."*** *- in "Popular Pathology; Pancoast on the curability of Consumption", 1855.*

All Circulation Promotes Healing

> ***"Blood Circulation Promotes Healing;***
> ***Lymphatic Circulation Promotes Healing.***
> ***Thus, Stasis of Any Type; in Any Body System: Is the First Step in the Establishment of Chronic Disease. Thus, Resolve Stasis First; and The Symptoms of "Disease" will resolve by it self."*** *- Rui Alexandre Gabirro, Emunctologist*

Proper Blood Circulation is the Fundamental engine of the body's repair system. It actively delivers vital Oxygen, and Nutrients directly to injured tissues while removing metabolic waste and toxins. Without efficient blood flow, the natural healing process stalls. Here Micro-Circulation a network of tiny blood vessels including capillaries, arterioles, and venules; deliver Oxygen and Nutrients to cells and remove waste products. This Microscopic Flow Is Essential for: Healing, Tissue Repair, and maintaining Healthy Fascia, the

Connective Tissue that surrounds every Muscle, Nerve, and Organ; depends on constant hydration and nutrient exchange.

Urinary Stasis

"Before turning to medicinal methods of treatment, permit me to repeat urgently the plea that continuous efforts be made to impress upon the profession at large the paramount importance of Urinary Stasis in the Causation and in the Perpetuation of Urinary Infections.

And that, if any infection persists more than 3 or 4 weeks, a complete and careful urological investigation should be carried out at once, instead of waiting for months and until everything else has failed.

It should be remembered, that in the cases where **Dietary Treatment Cures an infection in spite of an associated Stasis - this does happen** — the patient still remains a prospective victim of the damage which will eventually result from the obstruction alone, even in the unlikely event that the infection never returns." - Dr David M. Davis, MD, Philadelphia, Pa, Professor of Genito-Urinary Surgery, Jefferson Medical College, in "Rationale of the Treatment of Urinary Infections", New York State Journal of Medicine, 15 January 1937.

> ***"Whenever the amount of thickening and induration of the pericardium and accumulation of pus occurs to the extent that the heart action is markedly embarrassed, we get the series of symptoms and signs known as "inflow stasis."*** *The heart, restrained by its surroundings, alternates between systole and slightly relaxed systole. Full diastole does not take place.* ***The right and left hearts have no opportunity to fill with blood before the succeeding systole, and thus arises a venous stasis of the entire body. This stasis soon manifests itself by a massive anasarca with great enlargement of the liver. If unrelieved, death results from circulatory stasis."*** *- Dr David H. Hallock, MD, FACS, in "Empyema of the pericardium", New York State Journal of Medicine , 15 February 1937.*

> ***"The role of urinary stasis in the causation of concretions (masses of mineral matter) has been shown. Crystallization is favoured in stagnant water."*** *- in "New England Journal of Medicine", 18 January 1945.*

> ***"86% of patients with duodenal ulcer and obstruction showed the mucosal changes of superficial gastritis, whereas 62% of the non-obstructed group gave similar findings, severe gastritis was found 6 times more frequently m the stasis group. It appears that retention of gastric contents is associated with inflammatory changes in the gastric mucosa."*** *- in "New England Journal of Medicine", 24 May 1945.*

Degradation And Clearance

"Misfolding of newly formed proteins not only results in a loss of physiological function of the protein but also may lead to the **intra- or extra- cellular accumulation of that protein. A number of diseases have been shown to be characterised by the accumulation of misfolded proteins, notable examples being Alzheimer's disease and the tauopathies.**

T**he obvious inference is that these proteinaceous deposits are pathogenic features of the disease. However, systems such as the unfolded protein response and ubiquitin-proteasome complex are in place in the cell to target misfolded proteins for degradation and clearance.**

Evidence suggests that in disease states, these protein-handling systems may be overwhelmed and the misfolded proteins accumulate as either extracellular deposits (eg. senile plaques in Alzheimer's disease) or intracellular inclusions (as in Lewy bodies in Parkinson's disease). These accumulations may be the direct cause of the particular pathology associated with the diseases or they may be inert "packages" designed to protect the cell from Toxic Insult.

Undoubtedly, a large number of human diseases are associated with the accumulation of a whole myriad of misfolded proteins. This accumulation can be in tissues, intra- or extracellularly, in the Central Nervous System or in the periphery and contained within inclusions, aggresomes or filaments.

The evidence shows that in many cases the accumulations are the body's attempt to deal with what appear to be foreign proteins.

In fact, as has been reported by Walsh (Current Medicinal Chemistry, 2004) and colleagues in this issue, evidence does support a pathogenic role for small oligomeric forms of the peptides." - in "Protein Misfolding in Disease: Cause or Response?", Curr. Med. Chem. – Immun., Endoc. & Metab. Agents, 2003.

Intestinal Stasis

"During the last few years **a great deal of attention has been devoted to the study of the disorder known as: Intestinal Stasis.**

Sir Arbuthnot Lane, was probably the first to call especial attention to the affection, is characterized by Stagnation of the Intestinal Contents, resulting in the Production of Toxic Material, which is absorbed in greater quantity than the human anatomy has the capacity to render inert or excrete.

In consequence there result degenerative changes in various tissues of the body and diminished immunity to infectious diseases.

In the direct or indirect action of these disease-producing agents have been ascribed a great number of affections, including:

Various affections of the Stomach, Gall Bladder, Liver, Pancreas, Kidney, Skin, Nervous System, Lungs.

Indeed, according to Sir Arbuthnot Lane, **Intestinal Stasis is a direct or indirect cause of disease in every organ of the body.**

In the genesis of Intestinal Stasis, Sir Arbuthnot Lane thinks that Caecal Stasis is the primary condition, and that this tends to drag down the abdominal viscera with the production of stress on the attachments of the intestines which results in the formation of anatomical abnormalities such as those known as Jackson's membrane and Lane's kinks.

He is of the opinion that these bands and kinks frequently lead to stagnation of intestinal contents in the ileum (ileo-stasis), and that it is in this part of the intestinal canal that the production and absorption of toxic substances generally occur.

The malady, Intestinal Stasis, can scarcely be called a new disease.

The great majority of cases now called **Intestinal Stasis** were formerly placed under the heading of habitual Constipation; only a small proportion being thought to be due to organic obstruction.

Neither is the conception that Intestinal Stasis is a common cause of disease in other organs of the body new; for from time immemorial the beneficial effect of purgatives in the treatment of diseases of almost every organ of the body has been recognized.

The extent of the use of patent medicines, the therapeutic value of which is generally due to a purgative constituent, also suggests the same inference." - Dr Graham Chambers, MD, in "New York State Journal of Medicine", October 1915.

> ***"Doctors say Intestinal Stasis is a common cause of premature old age, Auto-Intoxication, heart and kidney troubles, high blood pressure, gall stones, etc."*** *- in "East Liverpool Review", 22 May 1928.*

> ***"Toxemia due to Intestinal Stasis is a common cause of increased blood pressure."*** *- Dr Hovell, MD in "Are Epidemics and Vaccinations Billion Dollar Scams", 2010.*

Stasis Allows the Absorption of Toxins which Enfeeble the Whole of the Connective Tissue Elements

"As to some of the great conditions which favour Cancer, I think no one can attack with success the position of Sir Arbuthnot Lane.

Dr Murray tells us dogmatically that malignancy is a positive change in "cells previously healthy." The statement is not very helpful. Health is a relative term, and however unhealthy a patient with chorion-epithelioma may be, it cannot be doubted that cells rioting in rapid erosion are, from their point of view, "healthy" enough for the functions they carry out with such disastrous vigour. The real question is what permits them to show such "health" or "ill-health", and **everyone must admit that confirmed and prolonged Intestinal Stasis reduces, relaxes, and almost destroys, the body's power of repair.**

That is to say, the resulting toxins enfeeble the whole of the connective tissue elements. Intestinal Ulcers occur because this is the case.

Intestinal Stasis and Other Foci of Infection

We wish to know what it is that causes Intestinal Stasis, and who can deny that nasal, oral, pharyngeal, and dental infections are probably its prime sources?

Periodontists as the result of soft food and deficient mastication may be the greatest, as it is the most universal, of these causes.

Sir Arbuthnot Lane's views on diet are well-known and cannot be controverted." - in "The Medical Press and Circular", 12 April 1922.

Some Fundamental Causes of Disease

"A notable landmark, in the search for the cause of disease, was the discovery of the circulation of the blood.

It entirely altered formerly held conceptions of anatomy and physiology, and opened up opportunities for the study of the normal and the abnormal in the human organism which up to that time had been closed, or partly closed.

It was obvious that this discovery was of vital importance in the search for the fundamental causes of disease.

Thus we approach by easy stages the scientific understanding of the circulatory system and lastly **the "magnum opus" of medical science, the germ theory of the cause of disease. The question of how bacteria conveys disease has been wrestled with almost ever since the theory was first promulgated.**

The menace of disease germs has been exaggerated, or rather erroneous views as to their mode of transmission have existed.

At one time people were quarantined if there was the slightest suspicion that they might be the means of conveying infection.

Now, however, bed rock has perhaps been reached in so far as knowledge regarding bacteria and disease is concerned. Most of the offending bacteria, parasites, spores and so forth have been traced to their lair and catalogued.

The belief that infective germs are air borne is dying if not already dead.

The opinion most prevalent is that many acute infections are conveyed by personal contact, while it is fair to assume that there are diseases which may never be associated with a specific organism as the essential cause.

Conspicuous amongst these are certain disorders of the glands and organs of internal secretion giving rise to such diseases as goiter in its various forms and which also influence adversely both mind and morals.

The study of the internal secretions is perhaps the most important of all branches of medicine. Evidence is every day multiplying and accumulating to the effect that the condition of the internal secretions are largely responsible for health or ill health.

When these secretions work smoothly and harmoniously, the body is in good health.

If the machinery of the body, of which these secretions are integral parts, gets out of gear, it is because one or other of these secretory organs is not working as it should work.

Brown Sequard was the chief pioneer, if not the pioneer, in the study of the internal secretions.

The path blazed by the early investigators has been persistently followed by more recent students of research.

The secretory glands have been studied one by one, until it may be said with truth that a new medical science has come into existence.

This science embraces not only the study of the internal secretions of the various glands and organs, but **it also involves the study of the correlation of the functions of these organs with others, and with the body as a whole**, together with the utilization of the healthy glands or their secretions in the treatment of diseases special and general.

It likewise includes the surgical removal of the diseased gland, entirely or in part, and the homoplastic or heteroplastic transplantation of healthy organs or parts thereof, in the effort to preserve their function or to offset the interference therewith by disease.

But before continuing with a discussion of the internal secretions, it may be well to briefly deal with the question of the resisting powers of the body in its relation to disease.

If the body is not devitalized, with a consequent diminution of the power of the tissues to resist the organisms and their growth, and the products of their growth, disease will not occur, or, at any rate, is least likely to occur.

What causes, then, this diminution of the power of the tissues to resist?

It is said to be largely due to certain fluids within our bodies that bathe those tissue cells, **and if these fluids are effete, that is, toxic, you can kill or greatly injure those cells.**

In fact, the power of the cells which compose the body to do their work is only commensurate with their nutrition and vitality.

The resistance, then, of the tissues to the introduction of disease or disturbed function is dependent in very large measure upon the condition of the cells which constitute them. The tissue resistance lies at the back of, and favours or hinders, the internal secretions in their work of regulating function.

If tissue resistance is weak, because the tissues have been flooded with poisonous material, the internal secretions will fail to work properly and disease of one kind or another or deviation from normal health will ensue.

Preventive measures therefore must be directed not only against the causative germ, if a bacterial origin be known or suspected, but against the products of these organisms, the toxins or poisons which have been liberated in the tissues as the result of the invasion. **Bacterial Toxins as well as tissue toxins must be freed from their poisons** if a successful issue is to be anticipated.

In short, **the body cells must be purified, elimination must be complete, if the body as a whole is to be made clean and disease prevented.**

It is not alone germs or poisons which may be conveyed or absorbed from without which cause disease and ill health, but the poisons which are generated in the cells which constitute the body itself, itself.

The whole matter of successful treatment, indeed, resolves itself into a question of body plumbing and sanitation. A body, like a house, must have an effective plumbing system.

The drainage must be so perfect that each individual cell is free from the stagnation and accumulation of the poisons taken into or engendered within the organism.

The play; "The Servant in the House", presents an excellent allegorical illustration of **the evil results of Defective Drainage.**

In order to improve the moral and spiritual tone of a beautiful and prosperous town, the inhabitants thereof determined to build a magnificent cathedral.

The church was built and came up to expectations in every respect, and the inhabitants flocked to the services.

It was not long before the discovery was made that despite the lovely music, eloquent sermons, and all the accessories which go to make up an attractive church ritual, all was not well.

The members of the congregation complained of headaches, and those who were most regular and assiduous in their attendance suffered from the most severe headaches.

Everything which could be thought of was done to remedy this state of affairs. All efforts, however, were of no avail until the suggestion was made by one of the elders that a friend of his should be called into consultation.

This friend was just an ordinary drain man, with no education and no gift of speech, but he recognized at once what was wrong with the cathedral.

It was no more nor less than a defective drain exactly under the altar.

It is the case with the body as with the cathedral.

A cathedral, a castle or a house may be a gem of architecture, **but all this goes for naught if Ventilation and Drainage are Defective.**

Sanitation is now a "Sine quo non" in the building of a house and the architect has so mastered the principles of hygienic house construction that he is able to achieve sanitary perfection.

Likewise, when plumbing gets out of order the trouble can be easily rectified by the application of the same knowledge.

It goes without saying that: the house of the body is not rendered clean and hygienic with equal facility as the house made by hands.

Each individual is virtually a law unto himself.

In Early Life the Foundation is Frequently Laid for an Imperfect Drainage System. The Teeth Are Factors of Considerable Importance in the initiation and development of Defective Drainage. When Teeth are Bad, and Mouth Unclean, the Whole Alimentary Tract Suffers.

Digestive Functions are Impaired, Constipation is an Outcome, and in many instances Chronic Intestinal Stasis, and Alimentary Toxaemia are Sequels. Bad Teeth, and an Unclean Mouth Act Injuriously on the Stomach, and Intestines while these in turn react on the teeth. In fact a vicious circle is established.

In addition **if the Teeth are Carious**, food cannot be thoroughly masticated and consequently assimilation must be imperfect.

In endeavouring, then, **to place the Drainage System of the body into smooth working order, the First Step is to supervise the Teeth and Mouth, to correct any defects of the teeth, and to Cleanse the Mouth and Gums.**

Particular stress should always be laid upon **the Immense Importance of the Internal Secretions as Factors in the Production of Disease, and especially of disorders of digestion.** Reference has been made already to **the vital influence of these secretions.** Indeed, some observers have gone so far as to hold that **so long as these secretions are generated properly and exercise the regulatory function in normal fashion, good health is the natural sequence.**

If, on account of defective drainage, the internal secretions are hampered or hindered in their work, the machinery of the body cannot proceed in harmonious unison. When any part of the works are clogged, the entire machine is thrown out of order and a strain is placed upon the other parts.

An abnormal condition is created and undoubtedly the origin of many diseases may be traced to interference with the output of the internal secretions.

When this occurs it is conducive to too great a flow of one or other of these fluids, and the result is a hyper-activity of certain functions over which the given gland of internal secretion is supposed to exercise its regulatory action.

Exopthalmic goiter, Graves disease, or, as I prefer to term it, systemic goiter, with its well-known classical symptoms, is perhaps the most striking illustration of this state of affairs. Conversely, if hypo-secretion of the thyroid gland ensues as the consequence of interference with its function, many distressing physical and mental deviations from the normal will result.

As, for example, marked obesity, and various other unnatural conditions which can only be attributed to insufficient secretion of the thyroid gland.

When all is said that can be said on the subject; the difference between the dwarfish driveling idiot and the well grown, cultured man rests mainly upon a slight disturbance of function, over secretion or under secretion of one or more of the internal secretions. **The mechanism of the human body is delicate, and, like a chronometer watch, it requires but little interference**, to put it temporarily, at any rate, “out of commission.” May it not be reasonable, in consideration of the above facts and plausible suppositions, to attribute to **lack or loss of function of an internal secretory organ, the etiology of many diseases,** which up to the present has been obscure. **Chronic Intestinal Stasis is a condition which may be due in part to failure of an internal secretion,** or at least, it appears in a high degree warranted by facts now known that **the Internal Secretions Play a Role of Importance in the Causation of Intestinal Stasis. Here again it is a question of the vicious circle, action and reaction.**

Arbuthnot Lane has suggested, and others have followed in his footsteps, that as **Intestinal Stasis is the forerunner of Alimentary Toxaemia, so may these conditions lead to Cancer.**

It is absolutely certain that all the ductless and intestinal secretory glands exert a most profound influence upon the human organism. It is well to bear in mind that the inefficient working of the internal secretions may so disturb all the functions of the body that the structure of the face may be changed, the construction of the teeth, the construction of the jaws, and may even prevent bones from healing. Knowledge of the Internal Secretions is concerned, we know enough about them to be able to assert with absolute conviction that they are fundamental factors in the causation of some diseases.

As for Intestinal Stasis, Lane contends that it is a fundamental factor in the causation of disease and few who have investigated the matter, and particularly from the clinical standpoint, will gainsay him; of course, however, **Chronic Intestinal Stasis and faulty action of the intestinal internal secretion and of other internal secretions are inextricably bound together.**

Long continued intestinal stasis will prejudicially affect the intestinal secretions, and these in turn will react on the digestive and intestinal organs.

Effective treatment, therefore, **of chronic intestinal stasis is indicated both as a preventive and remedial measure.**

The drainage canal must be cleared of its putrefying contents.

The vast majority of cases are of a mild character, and satisfactory drainage can be brought about by dietetic, hygienic measures. **It would be folly, indeed criminal, to operate when such methods bid fair to be successful**, and unless the case is desperate from the first, they should be given a fair trial. In the above paper I have endeavoured to draw attention to some of the fundamental causes of disease and I trust that I have made my points clear. **I have laid especial emphasis on the vital importance of the internal secretions in the conservation of the body's health,** as I like many others am convinced that **in the fight against disease a full knowledge of the action of these secretions is essential to successful results.** Some of the fundamental causes of disease still remain shrouded in mystery, but the obscurity of many is being dissipated, **and in my opinion it is along the line which I have laid down in the article that the unravelling of the tangle of many of the unsolved ones will hinge."** - Dr William Seaman Bainbridge, AM, ScD, MD, CM, New York City, in "Some Fundamental Causes of Disease", Dental Outlook, February 1918.

Endocrine to Organ: Drainage, Detoxification and Disease

"The Endocrine System regulates metabolism. How the Endocrine System Affects Organs: Endocrine demand solicits organs to do something.

The targeted organ, (or organs), may serve one or more of the following roles:

1. **Intake**
2. **Uptake**
3. **Processing**
4. **Excretion**
5. **Detoxification**
6. **Growth**
7. **Production**

For example, when Adrenocorticotropic Hormone (ACTH) [a hormone produced in the pituitary gland in the brain], stimulates the Adrenal Gland to produce Aldosterone, it anticipates that Aldosterone [a steroid hormone produced by the adrenal cortex that regulates blood pressure and electrolyte balance; by controlling the reabsorption of sodium and water, and the excretion of potassium, in the kidneys], will affect Electrolyte and Water Balance. To accommodate that, Adrenocorticotropic Hormone (ACTH) also stimulates the Colon to reabsorb Electrolytes, and Water from stool that Aldosterone will require for its actions.

During the adaptation response, Follicle-Stimulating Hormone (FSH) [a gonadotropin, glycoprotein polypeptide hormone, is synthesized and secreted by the gonadotropic cells of the anterior pituitary gland, and regulates the development, growth, pubertal maturation, and reproductive processes of the body], stimulates the ovaries to produce estrogens for the construction of immune factors. The Follicle-Stimulating Hormone solicits the colon to absorb more proteins, and estrogens solicit the liver to produce immune factors.

However, the liver is at risk of being congested, impairing its detoxification of the blood and its management of nutrients through portal circulation.

Each axis has its particular organs that it solicits for various functions.

Prolonged or intense solicitation diminishes buffering capacity and adaptability.

When the Organ Solicited Cannot Keep up with the Demands Imposed by the Endocrine System it can become Congested. In Determine that can Affect Drainage or Detoxification. These Dysfunctions Are Implicated in pre-critical and critical terrains Of Every Disorder.

Concept of Congestion

Congestion is an alteration in hemodynamics that results in Impaired Egress of Liquids from a space. There are 4 General Causes of Congestion, implicating various levels of: Neuroendocrine, Lymphatic and Organ Dysfunction.

They are interrelated and interconnected. When congestion occurs due to a change in the metabolic demand, it is initially adaptive in nature because it brings in additional metabolites, electrolytes, and fluids required for cellular metabolism.

Endocrine-Digestive Glands Couplings

Each Endocrine axis mobilizes, utilizes, or influences absorption or excretion of various metabolites.

Hypothalamus, Pituitary, Large Intestine

Stool contains various metabolites and nutrients.

They arise from 3 sources:

1. **Partially undigested food.**
2. **Intestinal microbial metabolism.**
3. **Excreted biological waste.**

Central hormones stimulate peripheral hormones which influence metabolism and demand particular metabolites. Central hormones solicit the colon to scavenge stool for metabolites related to the function of their peripheral hormones.

This relationship can be evaluated by deep palpation of the colon on physical exam. Tenderness on palpation reflects an oversolicitation of the central hormones at that area for nutrients related to the functioning of their respective peripheral glands **(consider a patient who presents with a history of migraines).**

Corticotropic: Stomach, Small Intestines, Kidney

Cortisol Increases Gastric Acidity.

> ***"Fear, Stress, Anxiety, Happiness, Strong Emotions, Can Affect the Heart and Stomach. One of the possible consequences is Stress-Induced Gastritis.*** *The Gastrointestinal System is a fundamental part of our body responsible for digestion and absorption of nutrients. It is made up of several organs, the stomach, small intestine, and colon, which work in synergy to ensure the proper functioning of the digestive process.* ***When the body is exposed to prolonged, chronic stress, changes can occur in the autonomic nervous system, which includes the sympathetic and parasympathetic nervous systems. Chronic stress often leads to hypersensitivity of the sympathetic nervous system, which can cause the onset of pathological symptoms at the gastric and intestinal levels. A healthy lifestyle and diet reduce irritation of the stomach lining and is appropriate preventive behaviour."*** *- in "Stress-Induced Gastritis", St. Camillus International University of Health and Medical Sciences, 21 February 2024.*

Cortisol it also increases the uptake of lipids from the small intestines.

Gastric acidity serves as both a protection against pathogens, as well as an augmentation of the hydrolysis of proteins. The uptake of lipids anticipates the later reconstruction of lipid-based structures in the body such as the cell membrane at a later time. Lipids also are a substrate for cortisol production. **Aldosterone regulates fluid and electrolytes. Within the kidney it stimulates retention of sodium and water, and excretion of potassium.**

Gonadotropic: Liver, Gallbladder

The Gonadotropic Axis consists of steroids composed of Cholesterol.

Bile is produced in the liver, then refined and stored in the gallbladder.

Bile activity is inversely related to cholesterol reuptake and directly related to excretion of toxins.

Estrogens and progesterone favour the retention of bile.

This increases reuptake of cholesterol, which provides more substrate for steroidogenesis. However, **Prolonged Stasis of bile can lead to the Formation of Biliary Calculi, as well as Impair the Evacuation of Lipidsoluble Toxins.**

Thyrotropic: Exocrine Pancreas, Intestines

The Thyroid-Stimulating Hormone (TSH) stimulates the exocrine pancreas in the excretion of digestive enzymes, particularly proteolytic ones.

This is related to 2 functions of Thyroid-Stimulating Hormone:

1. The first is its pro-anabolic action on cells,
2. The second is its role in soliciting amyloid proteins as a bridging energy before the time in which glucose or lipids are oxidized for Adenosine Triphosphate (ATP) production [ATP a organic compound that provides energy to drive many processes in living cells].

The Parathyroid Hormone (parathormone or parathyrin), is a peptide hormone secreted by the parathyroid glands that regulates the serum Calcium concentration through its effects on bone, kidney, and intestine, and **Vitamin D3 both act on the intestines to Influence the Absorption of calcium.**

Endocrine-Emunctory Relationships

An Emunctory is an organ that drains waste products, the 2 catabolic axes regulate Emunctories as they are a source of surges in waste products related to catabolism.

General Catabolic: Liver, Digestive Tract

The general catabolic activity managed by the corticotropic, and thyrotropic axes require a general functioning of the liver as an organ of detoxification, and secondarily of the gallbladder for the excretion of lipophilic toxins.

The digestive tract must maintain a proper rate of motricity and commensal flora in order to complete the detoxification proper and evacuation of waste products bound to stool.

Corticotropic: Kidney, Skin

The corticotropic axis specifically relies on the drainage of hydrophilic toxins from the kidneys.

The efficiency of this drainage affects the resorptive rate of electrolytes and water required by the corticotropic axis in its adaptation response.

The logic of efficiency of Medicinal Plants that serve as hepato-renal drainers is now clear. The skin is another point of egress and is the largest organ of drainage by surface area in the body.

Its connection to the corticotropic axis, is that both serve as a defence against noxious external agents.

Thyrotropic: Lungs

The thyrotropic axis regulates the rate of cellular metabolism, thus the rate of glucose oxidation and cellular respiration for Adenosine Triphosphate production.

The greater the rate of oxidation, the greater the production of carbon dioxide will be. Carbon dioxide is exhaled from the lungs, hence the relationship to the thyrotropic axis.

Endocrine-Emunctory Interaction and Disease

The Interaction of the Endocrine System to Emunctories Is Key to Understanding the Pre-Critical and Critical Terrains of General Categories of Disease. In clinical practice, even if one cannot recall the entirety of the critical terrain, one can still institute an Effective Drainage of key Emunctories.

According to the theory of Endobiogeny, relieving even one element of the critical terrain may be enough to induce remission into a pre-critical state.” - in “The Theory of Endobiogeny”, Vol.1, 2019.

Endobiogeny

Endobiogeny is a Terrain Theory that assesses how the “internal (endo-) life (bio-)” of the body is generated and sustained (-geny). It is a systems theory of biology that considers **the Endocrine System to be the True Manager of the Body.**

Role of the Endocrine System

The body is an organized system: the endocrine system is a true manager of the body; because it is the only system that is ubiquitous, self-managing and able to manage other systems simultaneously.

From fetogenesis, **the Endocrine System is the first and primary system that manages childhood, puberty, pregnancy, parturition, genital pause, death, and adaptation against every stressor.**

The Endocrine System is a primary object of study with respect to the structure and function of the body, and as the initiator of adaptation, the autonomic nervous system also plays an important role.

"With the new millennium came the evolution of the Phytotherapy Society "Société Française d'Endobiogénie et Médecine" (French Society of Endobiogeny and Medicine. Endobiogeny), was now front and center as a new scientific theory.

Dr Duraffourd, MD, and Dr Lapraz, MD [have been developing this model since the early 1970's]. In 2001 published their magnum opus Traité de Phytothérapie Clinique **(A Treatise on Clinical Phytotherapy)**.

Endobiogeny as a Theory of Terrain was introduced.

The Summary of 30 years of work in Clinical Phytotherapy was reorganized and classified **According to Principles of Integrative Physiology.**

This work represented the first time in the known history of medicine **the application of Medicinal Plants not by symptoms but integrative physiologic principles in order regulate the critical terrain of disease.**

The Endocrine System Is The Manager of the Terrain; Every Disorder: be it physiologic, physical, mental, or emotional, Directly or Indirectly Implicates a Certain Level of Endocrine Dysfunction.

Liver: Key to Buffering Capacity

Among the organs of adaptation; The Liver is perhaps the most important. It is the Emunctory par excellence for both catabolic axes: Corticotropic, and Thyrotropic. It provides buffering capacity for the organism by allowing acidic, inflammatory waste products of catabolism to be metabolized, to prevent degradation and fragilization of the terrain.

The Liver Plays a Role in Immediate Adaptability in 2 ways:

1. The first is storage of glucose as glycogen. Oxidation of glucose is the most efficient way of Adenosine Triphosphate production, and is required both for basal and adaptive metabolism.
2. The second is production of hormone transport (binding) proteins.

This allows hormones to circulate with a 10–100-fold surplus and instantaneously be mobilized. It also participates in innate immunity.

Kupffer and dendritic cells surveil all blood from the portal vein related to exogenous intake of nutrients. **Liver produces bile, stored in the gallbladder.**

Bile binds lipophilic metabolites processed by the liver and allows them to be excreted in stool. Thus, we can speak of a Hepatobiliary unit.

This unit also regulates Cholesterol levels.

Cholesterol ensures a sufficient base material for the production of the hormones of immediate adaptation through the corticotropic adrenal cortex.

It is the base material for peripheral gonadotropic hormones of short-term adaptation. **It is also the base material for Vitamin D, which plays a role in immunity and regulation of the thyrotropic axis. The hepato-biliary unit is permanently submitted to control and regulation by the systems of adaptability of the organism during all durations of adaptation demand, be they of internal and external origin.**

Splanchnic System

> ***The Splanchnic System refers to the blood and nerve supply for the gastrointestinal organs, including the stomach, liver, spleen, pancreas, small intestine, and large intestine.*** *Its blood supply comes from the celiac, superior mesenteric, and inferior mesenteric arteries, with the portal vein also playing a key role in blood flow to the liver.* ***The nerves are responsible for controlling digestive function and can be divided into sympathetic and parasympathetic components.***

The Splanchnic System includes the splanchnic bed, perihepatic, and perisplenic circulation. Approximately 30% of total circulating blood volume is distributed to the splanchnic system: 1500 L/min.

Vital organs such as the Brain and Kidney receive 14% and 22%, respectively.

The splanchnic bed is an element of the functional reserve of buffering capacity.

The Splanchnic System is the single largest source of elements of adaptation.

Within this system leukocytes, erythrocytes, and platelets are sequestered and available for immediate reentry into the general circulation.

Both its content of blood and cellular elements from the bone marrow are a key part of the buffering capacity of the organism, particularly in immediate adaptation. The Splanchnic System expresses a close integration of autonomic, vascular, Emunctory, and annexal organs vital for the immediate survival of the organism.

Emunctories

An Emunctory is an organ that drains and excretes waste products.

These products may be from catabolism (or external toxins), thus they are under the control of the catabolic axes: the corticotropic and thyrotropic.

The same Emunctories implicated in drainage and detoxification have crucial non-Emunctory functions in the body: Endocrine, Digestive, etc.

Thus, the Impairment of Drainage due to a relatively excessive or prolonged

catabolism, endogenous insufficiency of metabolic capability, vascular or lymphatic congestion, anatomical alteration in the liberal flow of waste products, or any combination of the above may compromise the other activities of the Emunctories.

A good comprehension of Emunctory and non-Emunctory function of glands, and their relationship to neuroendocrine activity is capital according to the theory of Endobiogeny.

Autonomic Nervous System-Endocrine-Emunctory Integration

The Autonomic Nervous System has 2 types of direct relationships with the Endocrine System, and a 3rd relationship with respect to the Emunctories and other organs that the Endocrine System acts upon.

1. Hormones are an organo-metabolic product of the metabolism of endocrine glands, meaning Autonomic Nervous System regulates the general rate of production and excretion of these hormones under the general plan installed by trophin hormones that stimulate corresponding downstream glands.
2. The various adaptation syndromes are initiated by the Autonomic Nervous System.

Each endocrine axis has a relationship with a particular Emunctory. The Autonomic Nervous System regulates blood flow, to and from these organs as well as the general metabolic capabilities of these organs to increase detoxification capabilities.

Stages of Disease Development

There are 5 stages related to the liminal manifestation of disease.

These factors are:

1. Pre-critical terrain (cause).
2. Provoking agent (aggressor).
3. Critical terrain (response).
4. Mechanism.
5. Effect.

All 3 factors of the pre-critical terrain must be present at the time of exposure to the provoking agent in order for disease to manifest.

When In Doubt Drain The Key Emunctory

Thus, the adage that when in doubt, Drain the key Emunctory.

The agent, or, aggressor, is the factor that solicits a response by the organism.

The aggressor is merely an agent provocateur. It does not cause disease. It is the patient's response to the aggression that installs the disease, in the face of the pre-critical terrain. This is why the exploration of the individual patient's terrain is so important to assess. For example, in inflammatory bowel disease, the consumption of a low-fiber, refined carbohydrate and dairy are implicated in the development of disease." - in "The Theory of Endobiogeny", Vol.1, 2019.

Dysbiosis

"The Immune System is a critical element that helps ensure the survival of the organism. Both the structure and function of the Immune System is closely regulated by neuroendocrine factors and Emunctory Function. Dysbiosis is a disequilibrium of commensal flora with respect to the endobiogenic needs of the individual organism.

This Disequilibrium Due to 3 Reasons:

1. **Insufficiency of commensal flora.**
2. **Loss of diversity: a relative imbalance in the normal commensal flora.**
3. **Pathogenic flora competing with the commensal microbiome.**

Determining the nature of the imbalance is important in selecting the appropriate therapy.

Implications of Dysbiosis in Local, Regional, and Systemic Disorders

Dr Jean Seignalet, MD, has proposed a categorization of Disorders related to Diet and Dysbiosis. He states in "L'alimentation ou la Troisième Médecine", (Diet, or, the Third Medicine) 1996.

A Disequilibrium of Flora Drives 2 Types of Pathologies:

1. **Diseases of Accumulation.**
2. **Diseases of Elimination.**

Diseases of Accumulation refer to disorders in which metabolic products are accumulated and deposited in tissues in which they are not meant to be deposited.

Diseases of Elimination are disorders where insufficient Emunctory function results in re-toxification and movement of substances to secondary and tertiary Emunctories. By this classification, we find that the following disorders are all linked to dysbiosis and alimentation (abbreviated all categorizations by Seignalet).

Conditions And Sates of Health
(% Result of Healthy Diet)

1. Rheumatoid: a. Rheumatoid arthritis – 82% [includes 50% improvements]
   b. Ankylosing spondylitis – 95% [includes 50% improvements]
   c. Systemic lupus – 95% [includes 50% improvements]
2. Thyroid: Grave's disease
3. Neurologic: a. Multiple sclerosis – 98% [includes 50% improvements]
   b. Guillain-Barré – 86%
4. Metabolic: diabetes mellitus, type 1
5. Hepato-biliary: a. Autoimmune hepatitis
   b. Sclerosing cholangitis - 100%
6. Intestinal: celiac disease
7. Miscellaneous: a. Uveitis
   b. Nephropathies
   c. Addison's disease

Diseases of Accumulation
(% Result of Healthy Diet)

1. Rheumatologic: a. Fibromyalgia – 90% [includes 50% improvements]
   b. Gout
2. Neuro-psychiatric: a. Schizophrenia
   b. Alzheimer's disease
   c. Parkinson's disease – 91% [includes 50% improvements]
3. Metabolic: a. Diabetes mellitus, type 2 – 100% [includes 50% improvements]
   b. Obesity – 72% [includes 50% improvements]
   c. Atherosclerosis
4. Tendonitis – 88%
5. Osteoarthritis – 94% [includes 50% improvements]
6. Osteoporosis – 70% [halted 70% out of 100%]
7. Migraines – 93%
8. Tension Headaches - 93%
9. Endogenous nervous depression - 100%
10. Hypoglycaemia – 87% [includes 50% improvements]
11. Hypercholesterolemia - 98%
12. Angina pectoris – 100% [includes 50% improvements]
13. Dyspepsia – 100% [includes 50% improvements]
14. Idiopathic Pulmonary Fibrosis - 80%

Diseases of Elimination
(% Result of Healthy Diet)

1. Digestive tract: a. Ulcerative colitis – 98%
    b. Crohn's disease - 99%
2. Dermatologic: a. Acne – 100%
    b. Eczema - 93%
    c. Urticaria - 100%
3. Pulmonary: a. Bronchitis, chronic - 100%
    b. Asthma - 98%
4. Immunologic: a. Recurrent infections
    b. Allergies: Hay Fever - 97%
5. Metabolic: Chronic Fatigue Syndrome
6. Gastritis - 100%
7. Gastroesophageal reflux disease GERD - 69%
8. Psoriasis - 83%
9. Ulcers - 100%
10. Chronic sinutsitis - 92%
11. Angioedema - 96%
12. Allergic conjunctivitis - 97%

(All percentages published by the "Jean Seignalet Association", 2025)

This categorization has value with respect to appreciating the impact of dysregulation of metabolism, dysbiosis, and Emunctories.

The results with radical dietary changes are also impressive.

The Microbiome

What has been demonstrated is the role of immunity, diet, and commensal flora in a large number of diseases. In an endobiogenic reflection, one must also consider the host-microbiome and the overall functionality of the organism.

Dysbiosis is the consequence of upstream dysfunction in the face of lifestyle choices, endogenous, and exogenous demands.

The dysfunction lies with the interaction of the local Adnexal Glands, digestive tract, Autonomic Nervous System, and endocrine system.

The host submits the flora to its metabolic needs and the flora submits the host to its metabolic needs.

Thus, **there are at all times 3 levels of interaction:**

1. Host-Flora.
2. Flora-Flora.
3. Diet-Flora.

Each of these Factors is dependent on 3 factors:

1. Quality of the endobiogenic equilibrium.
2. Secondary metabolic needs managed by the mechanisms of adaptation and adaptability as per each individual's needs.
3. Immune mechanisms of adaptation put in place at the intestinal level.

All the Relationships are Interrelated:

Diet Alters the Level of Neuroendocrine Function.

Neuroendocrine Activity Creates a Demand for Certain Nutrients for the Human, As Well as the Microbiome.

Ultimately, the host must consider its microbiome as a partner to be nurtured and supported more than a guest to be tolerated, or, worse, something to be ignored.

The Microbiome is an essential symbiont and collaborator with us, and part of the being in human being in its expression of Life.

It is the **"sine quibus esse non potest" (that without which life is not possible).**

Dysbiosis is a local imbalance of commensal organism with potentially systemic impact. **Dysbiosis is generally a downstream event that occurs due to upstream Dysregulation of Neuroendocrine and/or Emunctory function, as well as Diet and Lifestyle Choices.**

While **Dysbiosis is not the cause of numerous disorders, it can act as an accelerator of disease by altering immune function.**

An endobiogenic approach to dysbiosis addresses local, regional, and systemic factors and **treats the host and its microbiota in order to restore symbiosis.**

Symptoms Related to Dysbiosis

A. Direct

Direct indications of dysbiosis can be evaluated in 2 places:

1. Tongue: white coating.
2. Small intestines: deep palpation of the left peri-umbilical space.

B. Indirect

Indirect evaluation relates to the degree of implication of the various Emunctories, as well as systemic levels of neuroendocrine dysfunction.

Equilibration of Flora

Certain Medicinal Plants are able to re-equilibrate commensal flora and help restore biodiversity. One of the most efficient plants is peppermint.

It also possess activity related to Emunctory function, digestion, and autonomic nervous system functioning, which make them more than symptomatic treatments for dysbiosis. Medicinal Plants are helpful for patients who suffer from dysbiosis and food allergies and/or inflammatory conditions linked to a chronic inflammatory response derived from the diet.

They are highly efficient as they also have Emunctory and/or corticotropic and Autonomic Nervous System activity:

Astringent + Emunctory Drainage + Digestive Support.

The Liver

The liver is the one of the most complex and vital organs of the body.

It is chief amongst Emunctories. It is capital to the buffering capacity.

It is important in immunity. In management of terrain, appreciating the many functions of the liver is second only to understanding the role of the neuroendocrine system. The number of functions it performs is vast and perhaps not fully understood after millennia of study and contemplation.

The Liver is an Organ of:

1. **Metabolism.**
2. **Emunctory: detoxification and drainage.**
3. **Exocrine activity.**
4. **endocrine activity.**
5. **adaptation.**

The first 4 functions ensure the 5th.

A compromise — insufficiency or excess — of the first 4 impairs adaptation and fragilizes the terrain.

That is why the liver is Implicated in Nearly Every Disorder.

The liver is the largest organ in the adult body with an average weight of 1.6 kilograms. Because of the functional relationship between the Emunctory function of the liver and gallbladder, it can be considered to be a single unit of integrated function, referred to as the **"hepatobiliary unit."**

The liver maintains a constant but indirect anatomical relationship to the exocrine pancreas since the bile duct passes through the pancreatic head to open into the small intestines." - in "The Theory of Endobiogeny, Foundational Concepts", Vol. 2, 2019.

The Skin

"**Acne is a disorder in which the skin is over-solicited as a metabolic organ and congested as an Emunctory.**

The pre-critical terrain is a hypervagotonic state, often in vagotonic patients.

There is simultaneous congestion of the following Emunctories as a result:

1. Liver.
2. Exocrine pancreas.
3. Colon.

The Result of Congestion of the Liver and Colon is a Reduction of Toxin Excretion in the Stool. The Skin is Solicited as a Second rank Emunctory to Excrete the Waste Products.

The result of over-solicitation of the exocrine pancreas is increased uptake of nutrients, especially proteins. During the critical response, this oversupply of nutrients will be focused on the skin, supporting a hypermetabolism of the skin.

NB: The Emunctory congestion of the skin (precritical terrain) arises before the hypermetabolism (critical terrain). The Theory of Endobiogeny, **the pre-critical and critical terrain implicates mental, emotional, neurotransmitter, autonomic, endocrine, digestive, immune, and Emunctory activity.**

Congestion of Emunctories Is Another Expression of the Spasmophilia [condition characterized by an abnormal sensitivity of the neuromuscular system, leading to symptoms like muscle stiffness, cramps, twitching, and in severe cases, seizures].

The Dermis is a connective tissue of mesodermal origin, implicating the gonadotropic axis as the endocrine axis most implicated in the pre-critical terrain.

Hepatobiliary-Intestinal Congestion is capital in the pre-critical terrain, it obligates the skin to act as an Emunctory beyond its capacity, resulting in congestion and stagnation.

The Eczematous Lesions have 4 possible phases of evolution of their pathophysiology beyond excess deposition of keratin.

The **Common Emunctory Congestion is: Hepatobiliary (Primary), Intestines (Secondary), Skin (Tertiary).**

Lungs as Emunctory

The Lungs are Emunctories linked to the thyrotropic axis in adaptation.

The Colon excretes solid waste, the Kidney excretes liquid waste.

The Lungs excrete gaseous waste (mainly carbon dioxide).

The primary source of carbon dioxide is the oxidation of glucose for ATP production, which is why it is linked to the thyrotropic axis in adaptation.

There are 3 primary factors that increase carbon dioxide load: the rate of:

1. Metabolism; 2. Glucose utilization; 3. CO2 accumulation.

The greater the absolute rate of general metabolism (elevated metabolic yield index) and the greater the relative predominance of anabolism (low catabolism/ anabolism index), the greater the production of carbon dioxide will be.

Examples include growth spurts in children, infections, hyperimmune response to an allergen, and changing of seasons. The greater the utilization of glucose for oxidation, the greater the production of carbon dioxide will be.

The greater the congestion of the lungs or cardiac insufficiency, the less the discharge of CO2 from the lungs and the greater its accumulation.

This can be due to 4 reasons:

1. Excess production.
2. Insufficient compensatory renal metabolism of CO2.
3. Insufficient compensatory skin or kidney Emunctory function.
4. A combination of the preceding.

All 4 Endocrine Axes are implicated in Pulmonary Function as an Emunctory.

The gonadotropic axis initiates metabolism thus the need for oxidation of glucose for Adenosine Triphosphate (ATP) production (ATP is a nucleoside triphosphate that provides energy to drive and support many processes in living cells, such as muscle contraction, nerve impulse propagation, and chemical synthesis. Found in all known forms of life, it is often referred to as the “molecular unit of currency” for intracellular energy transfer.

Adenosine Triphosphate is produced through cellular respiration, which primarily involves breaking down glucose and oxygen into Adenosine Triphosphate, carbon dioxide, and water. This multi-stage process takes place in the mitochondria and includes glycolysis, the Krebs cycle, and the electron transport chain). The thyrotropic axis regulates oxygen uptake into cells, the somatotropic axis the amount of glucose or lipids entering the cells for oxidation.

The corticotropic axis plays a role in adaptive metabolism.

Emunctory Deficiency in Extrinsic Asthma

The greater the dysfunction of other modes of Drainage & Detoxification, the greater the solicitation of the lungs will be.

Order of importance of Emunctory Function in Asthma:

1. **Exocrine pancreas mucous production.**
2. **Liver congestion of detoxification and excretion.**
3. **Skin secondary organ of respiration and gas exchange.**
4. **Large Intestines secondary drainage of hepatobiliary metabolized waste products (Constipation).**

Emunctory support is part of the basic Treatment plan for Asthma.

The Emunctories should be drained, based on its role in pulmonary congestion, and general detoxification:

1. **Exocrine Pancreas.**
2. **Hepatobiliary (liver, gallbladder, bile ducts).**
3. **Skin.**
4. **Intestines (Large Colon).**

Menstrual Cycle Disorders

Disorders of the menstrual cycle can be nosologically categorized in multiple ways: symptoms, menstrual phase, or endocrine predominance/insufficiency.

This includes Endocrine Function across all 4 axes, Emunctories, glands, key organs, and the role of congestion.

General consideration of Emunctories and Glands

Liver

The Liver is implicated in all menstrual disorders.

Quantitative endocrine secretion and excretion can increase 30-fold above baseline levels throughout the menstrual cycle.

This creates repetitive, cyclical demands on the liver for metabolism of hormones. Otherwise, partial metabolites of hormones, with variable endocrino metabolic activity, will create a state of dysregulated hyperendocrinism.

Gallbladder

The gallbladder refines, stores, and excretes bile made in the liver.

Proper biliary function is required for the excretion of both endocrine products and waste products related to endometrial sloughing in the early follicular period.

After metabolism in the liver, hormones must be excreted in a timely fashion, bound to bile salts.

This is the primary route of estrogen elimination.

Impairment in choleresis, cholagogy, or defecation can augment endocrine activity beyond the intended levels as managed by the global terrain, favouring premenstrual symptoms.

In addition, hyperestrogenism impairs choleresis and increases the risk of gallstone formation.

Exocrine Pancreas

Exocrine pancreatic function is implicated in 2 ways.

1. The apportionment of nutrients from the diet for the fabrication of hormones, prostaglandins, cervical mucous, and proliferation of the uterine lining.
2. The role in biliary motricity and chronology.

Endocrine Pancreas

The endocrine pancreas plays its general role in glucose regulation for the rapid augmentation of metabolic activity related to growth of the uterus.

Over-solicited endocrine function favours inflammation of the uterus and increased tendency toward cramping and bleeding, associated with diet, and addressed through dietary changes.

Intestines

Small Intestinal function is key for transfer of nutrients to the portal vein and liver.

The colon as an Emunctory is important for the removal of waste products and to prevent reuptake of partially metabolized endocrine products.

Pelvic Circulation

Numerous factors play a role in physiologic congestion of the pelvic circulation in order to support the growth of the follicle in the ovary and the growth of the endometrial lining. Overtime, chronic over-solicitation of these factors, such as alpha-sympathetic, or inefficiency of ovarian endocrine production favours an adaptative pelvic congestion throughout the entire month, even in menopause.

This observation explains why women have a higher frequency of neurovegetative dissociation with colder feet than hands. There are numerous commonly used Medicinal Plants with good tropism for pelvic drainage." - in "The Theory of Endobiogeny, Foundational Concepts", Vol. 3, 2019.

The Emunctories

"Emunctories are the organs of drainage and detoxification (liver, gallbladder, kidney, intestines, lung, and skin).

While not technically an Emunctory, exocrine pancreas is included because of its implication with the hepatobiliary unit.

The corticotropic axis utilizes the skin, kidneys, bladder, liver, and intestines.

The thyrotropic axis utilizes the lungs, liver, and intestines.

Consider Emunctories in 3 ways:

1. **Catabolic axes: they remove catabolic products.**
2. **General: within each endocrine axis, they support general function.**
3. **Relationship to Specific Disorders.**

Congestion of Emunctories plays an important role in many disorders, and diminishes the buffering capacity of the patient. The adaptive role of congestion is to prolong the exposure of blood to an organ. This can be for an Emunctory role, i.e., hepatic metabolism of catabolic by-products, or, non-Emunctory, i.e., hepatic glycogenolysis. In either case, congestion compromises tissue functions.

Each branch of the Autonomic Nervous System can play a role in active or passive congestion.

Clinical Pearl: When in Doubt, Drain

Each Emunctory plays numerous other roles.

Emunctories are related to the pre-critical and critical terrains of every illness.

When in doubt about the critical neuroendocrine terrain, institute therapeutic drainage.

Decongesting an Emunctory can take the patient out of a critical state and relieve symptoms in a short period of time.

For example, one type of Gastroesophageal reflux disease involves elevated para tone on the Gastroesophageal sphincter.

Clinical Pearl

Gastrointestinal tract: Quotidian junction of all other elements of terrain

The Gastrointestinal tract is first among areas of treatment for all disorders.

The Gastrointestinal tract is the place where all other key elements of the terrain meet.

1. Neuroendocrine: regulation of digestion, distribution of nutrients for metabolism
2. Immunity: largest network of immune cells
3. Emunctory: key role of liver, gallbladder, exocrine pancreas in digestion
4. Buffering capacity: core elements of buffering capacity are within the splanchnic bed.
5. Central Nervous System: influence of emotions on enteric nervous system effects enteric immunity, digestion, and adaptation capabilities
6. Patient Autonomy: alimentation is the aspect of self-care most easily controlled but least frequently managed by the patient.

Clinical Pearl: When in doubt, drain and restore.

Clinical Pearls: Mindset in Practice

The Mindset of the Patient should be assessed in each evaluation.

In daily practice, most disorders, no matter how insignificant may appear to be, are precipitated or prolonged by the patient's Emotional Reaction to internal or External Events, or to the illness itself. An assessment of the cognitive-emotional state can be addressed in indirect or subtle ways in order to avoid giving the impression of performing a psychiatric evaluation, which is not the purpose of this assessment. Observe facial expression and tone of voice.

Observe the rate, regularity, and depth of breathing, related to Autonomic Nervous System and emotional states.

Simple inquiries can reveal important information that contextualizes the patient's illness to something larger in their life:

1. Have any relationships changed in your life recently?

2. Is this time of year significant for you in any way?

Endocrine-Organ Couplings

Essence: Central and Peripheral Endocrine Glands are linked to various glands and Emunctories.

Physical Examination

The physical examination is both an art and a science in Endobiogeny.

It requires keen observation, a sensitive hand, and perceptive mind.

The more time invested in the examination, the greater the probability of an accurate conclusion, and the simpler and more targeted the treatment will be.

The history catalogues symptoms: subjective perception.

The physical exam catalogues signs: objective perceptions by the examiner.

As with history, physical examination offers a wealth of information regarding the neuroendocrine management of terrain and the efficiency of the visceral organs and Emunctories. Multiple factors influence structure." - in "The Theory of Endobiogeny, Foundational Concepts", Vol. 4, 2019.

Electrolytes and Adrenal Insufficiency

"This review contain the Evidence that the Metabolism of Sodium, Potassium, and Chloride is in large measure controlled by the hormones of the adrenal cortex. It is also true that the physiologic response to administration of the hormones of the adrenal cortex is in large measure determined by the amount of Sodium and Chloride (Sea Salt) present in the body. Harrison and Harrow (1938) observed that, reduction of Sodium in extracellular fluids reduces the effectiveness of the hormone. Briefly stated, the adrenal cortex furnishes a mechanism to the body which modifies the transfer of sodium, potassium, and chloride through cellular structures.

In a normal animal deprived of salt the transfer of sodium and chloride from the glomerular filtrate to the blood against osmotic pressure until almost no sodium or chloride remains in the urine is perhaps the best example of the essential action of the adrenal cortex.

The remarkable effect of Sodium Chloride (Sea Salt) on renal function depends on something more than restoration of blood volume and of the normal concentration of electrolytes.

Maintenance of renal function with sodium chloride seems of itself to have an important part in the quality of the response. However, in the absence of the adrenal cortex it is necessary to provide a high intake of sodium and chloride and thus insure a continuity of the supply of these electrolytes for the kidney.

It is evident that both the conservation and continuity of supply of these essential ions are afforded by the mechanism which is furnished by the adrenal cortex." - in "Vitamins And Hormones", Vol. VI, 1948.

Lymphatic Drainage and Neurological Disease

"The central nervous system (CNS) does not possess defined lymphatic channels that are comparable with lymphatics vessels in organs elsewhere in the body, but this does not mean that the brain is devoid of lymphatic drainage.

Both Cerebrospinal Fluid (CSF) and Interstitial Fluid (ISF) drain partly or wholly to regional lymph nodes. Lymphatic drainage of the Central Nervous System has implications for neuroimmunology and for homeostasis of the neuronal environment in the brain.

Cerebrospinal Fluid and Interstitial Fluid appear to drain by separate routes from the brain, especially in humans. However, there are interrelationships between the 2 fluids that become more significant when drainage of Cerebrospinal Fluid or Interstitial Fluid is impaired by disease processes.

Physiological studies have revealed a substantial and immunologically significant Lymphatic Drainage from brain to cervical lymph nodes.

Cerebrospinal fluid drains via the cribriform plate and nasal mucosa to cervical lymph nodes. More significant for a range of human neurological disorders is the Lymphatic Drainage of Interstitial Fluid (ISF) and solutes from brain parenchyma along capillary and artery walls.

Tracers injected into grey matter, drain out of the brain along basement membranes in the walls of capillaries and cerebral arteries.

Lymphatic Drainage of antigens from the brain by this route may play a significant role in the immune response in infections, experimental autoimmune Encephalomyelitis and Multiple Sclerosis. Neither antigen presenting cells nor lymphocytes drain to lymph nodes by the perivascular route, and this may be a factor in immunological privilege of the brain.

Vessel pulsations appear to be the driving force for the Lymphatic Drainage along artery walls, and as vessels stiffen with [metabolism], amyloid peptides deposit in the drainage pathways as Cerebral Amyloid Angiopathy (CAA).

Blockage of Lymphatic Drainage of Interstitial Fluid and solutes from the brain by Cerebral Amyloid Angiopathy may result in loss of Homeostasis of the Neuronal Environment that may Contribute to Neuronal Malfunction, and Dementia. Facilitating perivascular Lymphatic Drainage of Amyloid-B (AB) in the elderly may prevent the accumulation of AB in the Brain, Maintain Homeostasis and provide a therapeutic strategy to help avert cognitive decline in Alzheimer's Disease.

Lymphatic Drainage of Interstitial Fluid and Immune Cells from Organs other than the Brain

Organs such as the Lungs, Gut and Skin have well-defined lymphatic drainage channels distinct from arteries and veins. Tissue fluid that does not return to the blood drains along thin-walled lymphatics lined by endothelium to regional lymph nodes. Lymphocytes, macrophages, reticulum cells, tissue debris, tumour cells, bacteria and soluble antigens also drain along lymphatics to lymph nodes. Lymphatic Drainage is driven by filtration pressure, contraction of adjacent muscles and pulsations of neighbouring arteries. The soluble antigens, lymphocytes and antigen-presenting cells that pass along lymphatics to lymph nodes constitute the afferent arm of the adaptive immune system. Antibodies formed in the lymph nodes and the effector lymphocytes of the immune system pass into efferent lymph, and circulate through the blood to their target tissues.

Lymphatic Drainage and the Pathophysiology of Neurological Disease

Perivascular Lymphatic Drainage of the Central Nervous System (CNS) plays a fundamental role in neuroimmunological reactions and in regulating the balance of Interstitial Fluid, and solutes within the parenchyma of the CNS.

Physiological Drainage of antigens from the Brain to regional Lymph Nodes appears to play a role in Neuroimmunological responses in Autoimmune Disease. Similar mechanisms may operate in infections of the CNS.

The balance of Interstitial Fluid and solutes in the Central Nervous System may be disturbed in a variety of Neurological Diseases, either by:

1. **The generation of excess Interstitial Fluid, or by**
2. **Failure of the Drainage Pathways.**

In Vasogenic Oedema associated with damage to the Central Nervous System, the volume of fluid and proteins may overload the perivascular drainage system, contributing to the problems associated with resolution of the Oedema in the CNS.

Similarly, infusion of Cerebrospinal Fluid (CSF) into periventricular brain tissue in acute hydrocephalus appears to overwhelm the Interstitial Fluid drainage system particularly in the white matter.

Disturbance of Perivascular Drainage of fluid and solutes in the Pathogenesis of Cerebral Amyloid Angiopathy, Alzheimer's Disease, Creutzfeldt–Jacob disease, and other dementias will be discussed as part of the complex of Protein Elimination Failure Arteriopathies (PEFA) that may also include cerebral autosomal dominant arteropathy with subcortical infarcts and leukoencephalopathy (CADASIL).

It is possible that immune complex inflammatory arteritides also fall into the PEFA group with deposition of immune complexes in the Interstitial Fluid drainage pathways in artery walls. Peripheral nerves also appear to rely upon perivascular drainage for the elimination of fluid and solutes as illustrated by the occurrence of amyloid angiopathy particularly involving transthyretin.

Multiple Sclerosis

The lack of evidence for migration of antigen-presenting cells from the parenchyma of the Central Nervous System to regional lymph nodes in the neck or lumbar region suggests that **the pathogenesis of Multiple Sclerosis (MS) as a T lymphocyte-mediated autoimmune disease depends upon drainage of soluble antigen from the Central Nervous System to regional lymph nodes.**

Failure of Elimination of Amyloid-B from the Brain in Alzheimer's Disease

The pathology of Alzheimer's disease is characterised by the intraneuronal accumulation of tau protein and by the deposition of insoluble Amyloid-B in the extracellular compartments of the brain. Amyloid-B is also deposited in the perivascular Lymphatic Drainage pathways in the walls of capillaries and arteries as Cerebral Amyloid Angiopathy. While excessive or aberrant production of Amyloid-B in the brain may be a feature of the small number of familial cases of Alzheimer's disease, failure of elimination of Amyloid-B from the ageing brain appears to be a major factor in the pathogenesis of the more common sporadic Alzheimer's disease. However, the brain is the only organ in the body that has serious problems with elimination of Amyloid-B with advancing age. **This failure appears to be partly due to the peculiarities of the perivascular Lymphatic Drainage pathways of the brain.** Several mechanisms have been identified for the elimination of Amyloid-B from the brain.

Protein Elimination Failure Arteriopathy

Lymphatic Drainage along basement membranes of capillary and artery walls appears, at first sight, to be unique to the brain.

However, analysis of a number of human diseases suggests that similar perivascular drainage pathways exist in organs other than the brain.

Conclusions for Therapy of Neurological Disease

We have reviewed the pathways for Lymphatic Drainage of Cerebrospinal Fluid and Interstitial Fluid and solutes from the brain. While Cerebrospinal Fluid drains to lymph nodes mainly via lymphatics in the nasal mucosa, Lymphatic Drainage of Interstitial Fluid and solutes from the brain is along perivascular routes and is separate from the drainage of Cerebrospinal Fluid. **Lymphatic Drainage of antigens may play a significant role in the pathogenesis of Multiple Sclerosis and further understanding of the afferent lymphatic pathways.**

Failure of Lymphatic Drainage of the brain appears to be a significant factor in the pathogenesis of Alzheimer's disease and other dementias." - in "Lymphatic drainage of the brain and the pathophysiology of neurological disease", Acta Neuropathol, 2009.

Trauma and Lymphatics

"Acute Lymphangitis Is Always Secondary To Some Infection. Chronic Lymphedema, with recurrent attacks of streptococcus lymphangitis or typical E**rysipelas, may be stirred up by Trauma.**

A woman, aged 25 years, who had a chronic lymphedema with attacks of streptococcus lymphangitis went to work in her own house, 3 months after the last flare-up. After 2 days, chills developed and prolonged rest in bed had to be instituted again. Injury to such a lymphedematous leg is always fraught with the danger of infection, since tissues soaked with retained lymph are notoriously susceptible to infection. The most trifling injury causes a lymph flow and should lymph be infected, a spreading infection results.

It is difficult, at times, to separate Venous Stasis and Lymph Stasis, as the lymphatics run with the large veins, whose closure or inflammation may readily affect the lymphatics and produce a lymph blockade. The Repair of the Lymphatics, Is Very Active, and unless an extensive obliterating lymphangitis develops, a simple block of the lymphatics is quickly overcome. Even a radical removal of all the lymphatics in the axilla is not followed by an oedema of the arm, unless an obliterating lymphangitis, infectious or carcinomatous, supervenes.

Trauma and the Vasomotor Apparatus

The intimate anatomical and functional relationship of the bloodvessels to their Vasomotor innervation naturally is altered in cases of trauma to bloodvessels. The intricate network of sympathetic fibers is affected by such trauma. Little attention has been paid, in the past, to the rather vague and poorly understood phenomena arising from this source.

A study of these disorders, however, explains many heretofore ignored or misunderstood signs and symptoms of trauma to extremities." - in "Trauma and Disease", 1941.

> ***"We desire in this treatise to emphasize, first, the applied anatomy of the lymphatics, second to demonstrate the possibility of determining the stage diseased organs and tissues are in through a method of palpation of lymph nodules at strategic points, and third to outline a method of clearing the system of toxic products through specific work on nerve centres that directly and indirectly reach the lymphatic nodules and vessels. The part the lymphatic system plays in its close relationship to the tissues in nourishment, assimilation, secretion, and elimination or purification, the part this system plays in infected areas. The disturbances and relations of the lymphatic system to the muscles, ligaments and organs that are closely associated with them. Sensitive to a degree, and carrying diseased nodular infection oft-times without enlargement of palpable significance, this system is more or less constantly charged with infectious material or septic poisoning"*** *- Dr F. P. Millard, DO, in "Applied Anatomy of Lymphatics", 1922.*

Blood Stasis a Factor in the Causation of Disease

"Deep Vein Thrombosis (DVT), and Pulmonary Embolism, collectively referred to as Venous Thromboembolism (VTE), are major contributors to global disease burden. VTE represents the 3rd leading vascular disease, after myocardial infarction and stroke. Studies from Western Europe, North America, Australia, and Southern Latin America reported overall annual incidences of VTE ranging from 0.75 to 2.69 per 1,000 individuals.

The global incidence of VTE is likely to increase with improving life expectancy in low- and middle income countries and an ageing population.

DVT develops mostly in the lower extremities, but the upper extremities, splanchnic veins, and cerebral veins may also be affected. Venous thrombi are fibrin- and red blood cells–rich red clots and mostly develop in the absence of endothelial injury. Venous valve pockets are the most frequent sites of deep vein thrombogenesis where a hypercoagulable environment, hypoxia, and **blood stasis can trigger Thrombogenesis.**

Hypoxia activates endothelial cells and induces Weibel–Palade body exocytosis.

Weibel–Palade body–derived P-selectin and VWF (von Willebrand factor) recruit leukocytes, platelets, and tissue factor–positive microparticles.

Blood Stasis is an important risk factor for Deep Vein Thrombosis." - in "Arteriosclerosis, Thrombosis, and Vascular Biology", 2017.

Mechanisms of Compensation of the Blood Circulatory Disturbances in Venous Stasis

"Intensification of transport of some components of the blood and lymph through the walls of blood capillaries and lymphatic sinuses during pathological processes and, in particular, in venous stasis, may be one mechanism of compensation of the latter. The aim of the present investigation was to study the morphological manifestations of formation of disturbances of the blood circulation in regional lymph nodes in the course of venous stasis at different structural levels.

Mechanisms of compensation of the blood circulatory disturbances in venous stasis thus operate through "discharge" of the excess fluid from the circulating blood stream into the lymphatic microcirculatory system of the lymph node and evidently in the following ways:

1. In the early acute period (1 hour after ligation of the caudal vena cava) mainly through the sharply increased number of fenestrated cells in the venous part of the capillary.
2. In the next period (6 hour to 3 days) by an increase in microvesicular transport through the endotheliocytes of the arterial part of the capillary and through fenestrae in the venous part, and in the period from 7 to 14 days by activation of microvesicular transport through both parts of the blood capillary.

At all the above stages of venous stasis fluid from the parenchyma of the lymph node passes into the marginal sinus evidently, through fenestrae and intercellular spaces, whereas it passes into the medullary sinuses only through fenestrae." - in "Effect of venous stasis on structural organization of compensation in lymph nodes", Bulletin of Experimental Biology and Medicine, January 1985.

Blood Stasis and Atherosclerotic Factors on Cognitive Impairment

"Our results indicated that Blood Stasis constitution was independently associated with atherosclerosis in patients with cognitive impairment.

Results of the present study indicated that Blood Stasis constitution promotes the formation of atherosclerosis through mechanisms that are different from that of traditional cardiovascular risk factors.

The interaction between Blood Stasis constitution and atherosclerotic factors was further investigated.

The results showed that there were interactions of Blood Stasis with hemoglobin, Red blood cell, and ankle brachial index on Cognitive Impairment ($P<0.05$).

These findings demonstrated that the Minimental State Examination score in hemoglobin, ankle brachial index, and brachial-ankle pulse wave velocity level decreased even further in the presence of concurrent Blood Stasis constitution.

The possible reason is that a relatively stable constitution has formed in adults and blood stasis exists throughout the whole process of disease development.

Thus, Blood Stasis is a product of disease development, and it in turn causes further damage in the target organs.

On the other hand, the nature of hemorheology changes with age.

These changes may cause high viscosity and hypercoagulability as well as high risks of Arteriostenosis and Atherosclerosis in the elderly population with Blood Stasis, leading to susceptibility and tendency to cognitive impairment despite the progression of chronic diseases.

In this study, we have shown that the elderly population with Blood Stasis constitution have a higher risk of Arterial Stenosis and Sclerosis, leading to susceptibility to Cognitive Impairment." - in "The Interaction Effect between Blood Stasis Constitution and Atherosclerotic Factors on Cognitive Impairment in Elderly People", Evidence-Based Complementary and Alternative Medicine, 2018.

Chronic Intestinal Stasis
Tonic Colon Hardening

"The object of this book is to describe an ailment which is far from infrequent and which causes much suffering, both mental and physical, to those affected by it, although with but little if any impairment of the general health.

This ailment, though it is in all probability widely recognized by individual practitioners, **has not as yet received adequate recognition in medical literature.**

It is, nevertheless, a perfectly well-defined ailment due to a definite perversion of a bodily function, and there is a simple and sometimes dramatically effective method of cure.

Although the symptoms range widely from abdominal pain to mental depression, or may be solely represented by gastric disturbance or by an interference with the peripheral circulation suggestive of Raynaud's disease, they are, nevertheless, physiologically dependent upon the essential nature of the ailment, and there is as a rule something distinctive and characteristic in their mode of occurrence.

The bodily function referred to concerns the Wall of the Colon, which is normally subject to two opposing types of muscular activity, the one more or less static and the other contractile.

Now excess of the static function on the part of some muscular fibres would mean undue resistance to those which were exerting their contractile power and therefore increased activity on their part.

This increase in the muscular activity of the colon would mean an exaggeration of the various reflex phenomena which result from the normal activity of the digestive organs.

With regard to its frequency **any one who systematically examines the Colon will be surprised to find what a large part it plays in the causation of the symptoms of patients.**

So far as my out-patient practice at the General Hospital was concerned, **the majority of my dyspeptic cases showed Tonic Hardening of the Colon, and were relieved by special Colon Treatment.**

In conclusion: I recognize the probability that those who have not made a practice of systematically examining the colon will be liable to think that this ailment has no objective existence, but is due to the author's imagination.

Before, however, any reader comes to this very natural conclusion, **I ask that he will palpate the colon in the left iliac fossa in a series of a score or two of cases, and whenever it is hard and tender inquire as to the presence or absence of the symptoms here recounted, and if present try the effect of Treatment by an Intestinal Antiseptic.**

It is my firm conviction that any one, who for the first time does so, will find that this book puts into his hands a new and effective means for the relief of human suffering.

Respecting Treatment

Whenever patients who, for some months have suffered from pain or from Mental Distress of Colon origin, obtain relief by treatment of the colon ailment, it is of the utmost importance that they should be given at least 3 or 4 weeks complete mental rest and change of surroundings. If this be not done the sense of relief which they experience will lead them so to overtax their deficient nervous energy that they will bring about a return of all their symptoms in consequence of the undue lowering of their nervous tone.

Concerning the Nervous System

In every case of Neurasthenia examine the Colon for Hardness and tenderness. If present, then colon treatment will in all probability, relieve and possibly cure the patient's symptoms. If Mental Inertia or Physical Lassitude occurs unexpectedly during working hours: suspect a Colon Origin. If Mental or Physical Lassitude occurs on first waking of a morning, and is speedily dissipated by physical or mental activity, the case is probably one of Reflex Circulatory Disturbance of Colon Origin. If a patient suffers from attacks of Causeless Weeping: suspect a Colon Origin. If a patient is liable to Sudden Attacks of Mental Depression or suicidal impulse which subside again in the course of minutes or hours: suspect Tonic Colon Hardening. If a patient is liable to wake between midnight, and 4 AM suffering from some form of Mental Misery, the cause is almost certainly Tonic Colon Hardening, and treatment of this condition will cure the patient. If Mental Symptoms of any kind occur as the result of physical exertion, or are due to the vibration of a shaky vehicle: suspect Tonic Colon Hardening.

The sudden onset of mental symptoms such as depression, obsessions, etc., in a patient previously free from them is suggestive of the onset of Tonic Colon Hardening. When a patient who, to all appearance, is in perfect health complains of Pain and Nervous Discomforts which are suggestive of Hypochondriasis: suspect Tonic Colon Hardening.

Concerning the Alimentary System

Whenever, in a Dyspeptic patient, the colon is tender and abnormally hard on palpation, reserve a definite diagnosis until treatment has lessened the colon disturbance. Abdominal Pain which is brought on or increased by exertion after meals is Almost Certainly Due to Tonic Colon Hardening. When a patient, who suffers from pain after food; states that food which gave him pain one day, often does not give him pain the next: **Suspect Colon Disturbance as a source of his discomfort.** When the kind of food taken appears to exert but little influence on the amount of pain which occurs after meals, **the pain is probably of colon origin.**

If abdominal palpation gives rise to pain which is referred to some distant point, such as the gluteal region or the opposite side of the abdomen: it is in all probability of colon origin. If vomiting occurs unexpectedly after meals, or as the result of nervous strain or excitement, it is probably Reflex and of Colon Origin. In dilatation of the stomach with retention of its contents, the pitch of the note given by the succession splash is high: suspect reflex pyloric spasm as the cause, and examine the colon carefully for hardness and tenderness.

In a patient with reflex gastric hypertonicity and pyloric spasm (evidenced by water-brash acidity, vomiting, etc.), remember that the cause may be Tonic Colon Hardening, and not necessarily 1 of the 3 usually recognized conditions; Duodenal Ulcer, Gall-Stones, or a pathological condition of the Appendix.

Concerning the Circulatory System

When Cardiac Symptoms such as pain or palpitation are unaccompanied by a definite amount of cardiac inefficiency: suspect a colon origin.

When pain, palpitation, and dyspnoea are as troublesome by night as by day, and especially if they occur in the small hours of the morning: suspect their colon origin. Suspect Tonic Colon Hardening in cases where cardiac symptoms occur under conditions which do not put special strain upon the heart, more especially if their occurrence is irregular, and they are sometimes brought on by circumstances which are, at other times, powerless to do so.

General Whenever palpation in the right or left iliac fossa shows that the colon is hardened and tender, it can be taken for granted that some disturbance of the nervous system is being occasioned.

In cases where this disturbance does not consist of pain, it will be found that the patient is either suffering from some form of mental misery or from some reflex disturbance of the stomach or of the circulation. When symptoms of any ailment occur only (or mainly) between midnight and 4 AM, they are probably due to tonic hardening and the cure of this condition will lead to their cessation.

If Tonic Colon Hardening be present in a patient suffering from pyloric spasm and reflex gastric hypertonicity, a definite diagnosis should not be made till after the colon condition has yielded to treatment. If, in a patient with symptoms suggestive of duodenal ulcer, or other definite disease, **Tonic Colon Hardening be found and its cure leads to a cessation of the symptoms, it does not follow that the patient is only suffering from the colon ailment. The recurrence of attacks of Tonic Colon Hardening after they have yielded to treatment in a patient whose nervous tone is good, is suggestive of the presence of some source of Auto-Infection, more especially a pathological condition of the Appendix."** - Dr Theodore Stacey Wilson, MD, FRCP, in "Tonic Hardening of the Colon", 1927.

Intestinal Adhesions A Factor in Chronic Intestinal Stasis in Epilepsies

"The trend of recent E**pileptologic research has been directed in large part toward the gastrointestinal tract and the glands of internal secretion. It has been away from the brain structures and the postulates built about them, and once more toward the factors of intestinal irritation and intoxication. The presence of constipation among epileptics has been noted so frequently that again the tendency has been to account for the seizures as due to the absorption of toxic products from the Chronic Intestinal Stasis that may be present.** Epilepsy may be a disease process dependent upon the absorption of irritating substances from the intestinal tract, the inhibition of the smooth muscle fibers of the intestines being due to over-action of the adrenals, because of dysfunction of the pituitary gland or of the pancreas, or because of irritation of the duodenum. This conclusion is based upon animal experimentation and Abderhalden tests for adrenalin. **Mechanical interference; the fecal current is obstructed, and chronic intestinal stasis with absorption of toxic products occurs.** Intestinal Adhesions and Bands of varying degrees and Etiology were described in 38 cases in this series.

These divide themselves into 2 groups:

1. Those that may be considered to be a factor in the causation of Chronic Intestinal Stasis.

2. Those that may be considered to be the result of this condition.

In Group A, the 4 cases of transduodenal hands must be placed, for being congenital, they antedate the onset of the epileptic seizures, and from their position could easily be a strong factor in producing Chronic Intestinal Stasis.

If the conclusion that the 8 c=Cases of Adhesions between the small intestines were the end-results of healed tubercular peritonitis is correct, then these may be considered under this heading, for from their very nature they would cause intestinal stasis of varying degrees. The remaining 25 cases (the case of umbilical hernia being excluded) must be placed under Group B.

The Adhesions about the Appendix may be the result of pericolonic exudations due to Chronic Intestinal Stasis, as well as the result of a more acute process.

Adhesions involving the remaining portions of the large intestine readily come under this heading.

In Conclusion, it is evident that intestinal adhesions and bands play a rather small part in the causation of Chronic Intestinal Stasis in the Epilepsies.

Excluding those lesions due to previous acute abdominal infection (i.e. tuberculosis), as well as those due to pericolonic exudations resulting from the stasis present, there are left but 4 cases (i.e. congenital transduodenal bands) in a series of 250 necropsies, where the clinical symptom may be said to be the result of the lesion found at autopsy." - Dr H. Caro, MD, Pathological Laboratory of the Monson State Hospital for Epileptics, Palmer, Mass., in "The Incidence of Intestinal Adhesions as a Factor in Chronic Intestinal Stasis in the Epilepsies", Boston Medical and Surgical Journal, 17 May 1917.

The Relationship of Chronic Intestinal Stasis to Epilepsy

"My own work on stasis offers, as explanation of the failure of starch reduction in the small intestine which he has described in Epileptics, the fact that extension of the catarrhal processes to the upper small intestine from the colon is due to mechanical obstruction at the ileo-caecal entrance and at the duodeno-jejunal junction secondary to overloading of the static colon.

A further Factor must surely be The Subversion of the Hepatic Functions by the High Acid, and Toxin Content Arriving By The Portal Channel.

There is, however, this also to be said:

The Destruction of Mucosal Cells in the Colon on a wide scale in Stasis releases into the Vascular System Toxic Agents; which, coming from such an origin, must have a specific affinity for mucosal cells at a distance.

Only thus can we explain the frequency and the chronicity of catarrh of remote mucous membranes (nasal, bronchial, uterine); which is so Constant a Feature in Chronic Stasis cases, and which proves so intractable until the main Colonic Reservoir of these Toxins is Overhauled and Repaired.

Closer Study of the Leaking Septic Tank; will yet yield a most Fruitful Contribution to medical science, and a Further Step to the Solution of Many

Problems Hitherto Accepted as Insoluble. These will almost certainly include a Large Proportion of Chronic Functional Disorders within the province of Neurology and Psychiatry, and with them the problem of Epilepsy will certainly be advanced definitely nearer to complete solution." - Dr A. White Robertson, LRCP, S. Edin., Lieutenant-Colonel, RAMC, in "Chronic Intestinal Stasis and Epilepsy", British Medical Journal, 27 December 1924.

The Relationship of the Intestinal Flora to Chronic Intestinal Stasis

"The Intestinal Flora is governed by a number of factors: The intestinal flora consists of bacteria that are present and usually growing within the digestive tube. The intestinal canal is a favourable culture tube in many ways.

There is favourable temperature for optimum growth of many species.

Necessary moisture is present, and, what is of greater importance, there are food substances in various stages of digestion which are incidentally converted into the most favourable substances for nutrition and growth of different species of bacteria. Bacteria multiply only in the presence of foodstuffs that meet their requirements. They are living micro-organisms which require bacterial food just as larger plants require plant food and animals require food suited to their needs. Many of our foods, especially after they have been acted upon by the digestive juices, make the best of culture media for many different species of bacteria. We have in the intestinal canal, therefore, a favourable culture tube containing favourable culture media.

Much of our food and drink, when ingested, contains millions of bacteria of many kinds, a large per cent of which, however, are destroyed by the digestive juices and cannot live or multiply in the intestinal canal.

In addition to the bacteria that may be present at the time it is ingested, food is still further most thoroughly inoculated during mastication and deglutition with the many species of bacteria that are always present in the mouth and throat.

As the food passes along through the digestive tube it receives further inoculation with the particular kind of bacteria that may be present in different parts of the canal. Although most of the bacteria that have grown in a particular mass of food pass on down with it, sufficient remains to inoculate heavily the next oncoming material. It is perhaps desirable to refer at this time to certain conditions in the digestive canal that are unfavourable or antagonistic to the growth of bacteria. First, there is the acidity of the gastric juice. Hydrochloric acid as concentrated as it is found in normal gastric juice is antagonistic to the growth of almost all bacteria and kills many of them. On account of the high acidity and perhaps the digestive action of the gastric juice, little or no multiplication of bacteria takes place in the normal stomach during digestion. As the partially digested food passes into the duodenum and the acidity is neutralized, this unfavourable condition for multiplication of bacteria is removed and such as have survived the action of the gastric juice may multiply. But there is met another antagonistic condition, viz., **the antibacterial action of the bile** and perhaps to a limited extent the intestinal juices. **Bile has a solvent effect upon many bacteria, and in this way, if not in others, greatly interferes with bacterial life.** In spite of these anti-bacterial influences, there arc always many bacteria to be found in the intestinal contents at any level. There may be little or no multiplication. In fact, while some species are being prevented from growing and may be killed out, other more resistant types or species may be multiplying.

As this heavily inoculated intestinal content passes on down through the intestinal canal, the bacteria which have survived the acidity of the gastric juice and the bile and the digestive ferments, begin to multiply more rapidly.

When the digestion is practically completed and the thoroughly inoculated material reaches the colon, bacterial growth is greatly accelerated.

Several species of bacteria that are common inhabitants of the intestinal canal are capable of most rapid multiplication in the presence of favourable conditions such as obtain in the colon, particularly the upper portion.

The multiplication of such organisms as Bacillus coli, is so rapid that the available bacterial food is greatly reduced in only a few hours time.

Naturally, multiplication slows down as the supply of nutritive material is reduced. Later, multiplication ceases and then the bacteria begin to die out and become less numerous.

Some of the more resistant ones live for several hours or days, just as they do in the test tube.

The total number of bacteria in the feces is decreased by anything, such as constipation or intestinal stasis, which prolongs retention in the colon.

On the other hand, anything that hastens expulsion greatly increases the number of bacteria in the feces.

A purgative increases manifold the total number of viable bacteria in the feces. In diarrhea the number of viable bacteria in the feces is enormously increased. It should be understood, however, that these do not outnumber the living and dead bacteria combined which are present when either Constipation or Stasis exists. The total number of bacteria expelled daily by an average, normal man has been variously estimated. Strasburger calculated that it amounts to about 128 trillions. A suitable microscopic preparation shows that bacteria constitute a large portion of the bulk of the feces. Suitable cultural tests, however, show that only a very small per cent, frequently less than 1%, of these are viable.

The others have died out as a result of the antagonistic influences present or of exhaustion of the culture material which takes place in the colon.

If we inoculate minimal quantities of B. coli, one of the common bacteria in the intestinal flora of man, into a tube of suitable culture medium, we find that multiplication is very rapid for the first few hours.

The number doubles in from about 12 to 17 minutes and continues to do this until the maximum number of viable organisms is reached in about 15 to 18 hours.

After this time the number of viable organisms diminishes and after a period of 2 or 3 days only very small numbers are present, but there are a few.

There are present, however, enormous numbers of dead bacilli.

This is exactly what occurs in the larger culture tube, the colon.

This applies to the other bacteria commonly found in the intestinal flora as well as it does to colon bacilli.

Some of them multiply even more rapidly and the peak in number of viable organisms is reached in even less time than in the case of B. coli.

As the older the culture the larger the number of dead and the smaller the number of living bacteria, so also the longer the feces have been retained in the colon, the more dead and the fewer living bacteria are present.

Since some multiplication continues to go on for a long time after the time when the maximum number of viable organisms is present, it is very apparent that the total number of bacteria produced is increased the longer the culture runs.

Therefore, Constipation or Intestinal Stasis results in a lessened number of viable bacteria and an increased number of dead bacteria in the feces, but at the same time an increase in the total number of bacteria produced.

These results are in proportion to the degree or completeness of constipation or stasis. **Let us now consider the effect of stasis or constipation upon the types or kinds of bacteria.**

Diet profoundly influences the intestinal flora under all circumstances.

As would be expected, where the intestinal contents are so richly inoculated with so many different kinds of bacteria, those for which the particular kind of food is most suitable would predominate in the flora.

The colon bacillus, of either the communior or communis type, or both, is far more numerous in the colon of normal adults.

It is a rapidly growing organism, widely disseminated in nature, and adapts itself well to the widest range of conditions with regard to nutrition and environment. Colon bacilli usually make up 75% to 95% of the bacteria in the feces of adults. Another organism usually quite numerous in the intestinal flora is B. welchi, or the gas bacillus. Still another is Micrococcus fecalis.

This latter is sometimes the most numerous organism in the feces of adults.

All of these are putrefactive bacteria and require protein, particularly animal protein, for their best growth. Diets rich in animal protein are most favourable for their growth. On the other hand, vegetable diets with little or no animal protein are very unfavourable.

A number of investigators, including Herter and Kendall, Herter, Hull and Rettger, Rettger and Horton, Torrey, Cannon, Rettger and Cheplin, Bass, and others have shown that when large amounts of lactose or dextrin are fed these putrefactive bacteria are greatly reduced and sometimes eliminated entirely.

The writer has fed lactose to an experimental subject in sufficient quantities to entirely eliminate all putrefactive bacteria, including colon bacilli, from the feces.

This condition was maintained over a period of 9 days, when the experiment was discontinued because of the appearance of reducing substances in the urine.

The intestinal flora of exclusively breast fed babies consists chiefly of B. bifldus and B. Acidophilus. B. Bifidus grows well only under anaerobic conditions such as are present in breast milk, while B. acidophilus is less exacting. Therefore B. Acidophilus is usually the predominating organism after the baby begins to drink water and to take other food which has been aerated. B. Acidophilus is a normal inhabitant of the intestinal canal and grows best in the presence of lactose or dextrin. No doubt the large per cent of lactose in human milk accounts for the abundance of this organism in the intestinal canal of nurslings. B. acidophilus, when grown in the test tube in milk or other media containing lactose, produces lactic acid. The feces of normal nurslings are acid for this reason. On the other hand, the feces of adults in which the putrefactive bacteria predominate are neutral or alkaline. If the intestinal flora is changed from the putrefactive type to the aciduric type dominated by B. acidophilus, the reaction of the feces becomes acid, as it is during the first year of life. This can be accomplished at will by suitable diet plus drinking a proper amount of milk culture of B. acidophilus (acidophilus milk), as has been shown by Rettger and Cheplin and by many other observers. Rettger and Cheplin in their classical experiments, which I believe should be read by all gastro-enterologists, also showed that the feeding which resulted in transformation of the fecal flora was accompanied by corresponding change in the flora at all levels throughout the intestinal canal. These observations show that the growth of other bacteria is prevented by acidophilus bacilli under favourable conditions with regard to diet in the intestinal canal, just as occurs in the test tube. We have inoculated tubes of suitable culture media, such, for instance, as milk plus lactose, with both colon bacilli and acidophilus bacilli. For a time colon bacilli are more numerous, but later they fall behind. If we now transfer some of this material to another tube of similar media and repeat the transfers daily, it requires only some 3 or 4 days for the colon bacilli to be eliminated entirely. The culture material becomes acid in the same way that the intestinal contents and feces are made acid when aciduric bacteria predominate therein. This acidity is due to lactic acid. **An aciduric intestinal flora does definitely Influence Stasis and Constipation.** This is testified to by numerous observers throughout this Country. **The favourable effect of an aciduric flora on Constipation, and Intestinal Stasis is due, in all probability, to the stimulating effect of the resulting acidity of the intestinal contents.**

In Conclusion

I would point out that **in addition to the favourable effect of maintenance of an aciduric flora upon stasis and constipation, maintenance of this flora also greatly reduces growth of putrefactive bacteria and the production of their harmful products.**

Summary

1. The intestinal content is richly inoculated with bacteria during mastication, deglutition and passage through the digestive tube.
2. The intestinal canal, particularly the upper part of the colon, constitutes a favourable culture tube.

3. Intestinal stasis and constipation tend to reduce the number of viable bacteria found in the feces, but also tend to increase the total number produced.

4. B. acidophilus and other aciduric bacteria, in the presence of suitable diet, reduce the number of putrefactive bacteria and acidulate the intestinal contents.

5. An aciduric intestinal flora tends to overcome Intestinal Stasis and Constipation, and the opinion is expressed that this is due to the resulting acidity.

6. In addition to exerting a favourable influence upon Intestinal Stasis and Constipation, an aciduric flora lessens putrefaction and whatever harm may result therefrom." - Dr C. C. Bass, MD, Tulane University School of Medicine, New Orleans, La., in "Southern Medical Journal", May 1924.

> *"The marketing of irradiated foodstuffs (such as dried milk for infant feeding) would appear likely in the near future. The process, however, has been patented to avoid exploitation, so that licensees will undoubtedly have to give guarantees regarding their irradiation treatment. It remains to be seen whether the Ultra-violet lamp can compete with bottled Sunshine in the form of cod-liver oil or tasteless vitamin concentrates therefrom. Clinical tests show that irradiated fat-containing foodstuffs are definitely antirachitic, the disadvantages being a slightly burnt flavour and the fact that overdosage will destroy vitamin potency. As regards Vitamin-B, there is a conflict of authority as to whether the amount required for metabolism is connected with protein requirements, carbohydrate intake, or total food, but there is a general agreement that there is an all-round shortage, among both poor and well-to-do of this water-soluble Vitamin.*
> ***This accounts for the prevalence of Intestinal Stasis, Neuroses, and Possibly has an Important Bearing on the Incidence of Cancer."*** *- in "The Chemist and Druggist", 27 March 1927.*

Intestinal Stasis a Factor in the Causation of Cancer

[In this paper Sir Arbuthnot Lane develops his thesis of auto-intoxication, arising from intestinal stasis, being closely related to the evolution of cancer. There is much clinical evidence to the effect that auto-intoxication is a marked factor of advanced civilised life — a factor from which native tribes, in certain parts of the world, are normally free. As long ago as 1865 the late Charles Moore, of the Middlesex Hospital, suggested as one of the causes of the then increasing mortality from cancer, excessive eating, dependent upon the nation's prosperity, and now there can be little doubt that intestinal stasis is the toll which excesses in diet exact, with autointoxication as the inevitable complement.]

"We know that its frequency bears a direct proportion to the degree of civilisation. Also that it **practically never occurs in certain races.** In evidence of this I will merely quote a few lines from a large quantity of information on the subject that I have collected.

Colonel McCarrison, than whom there is no more careful or accurate observer, states in his Mellon lecture that:

> ***"For some 9 years of my professional life my duties lay in a remote part of the Himalayas, where there are located several isolated races far removed from the refinements of civilisation. During the period of association with these peoples, I never saw a case of asthenic dyspepsia, of gastric or duodenal ulcer, of appendicitis, of mucous colitis, or of cancer, although my operating list averaged four hundred major operations a year."***

I would call attention to the fact that not only does Colonel McCarrison state that **Cancer does not exist in these races,** but that **the several abnormal conditions of the gastro-intestinal tract which form a part of the sequence which I called chronic intestinal stasis are also absent namely:**

1. **Asthenic Dyspepsia,**
2. **Gastric and Duodenal Ulcer,**
3. **Appendicitis**
4. **Mucous Colitis.**

This is of great importance, since it strengthens my argument as to **the preponderating part which Stasis Plays in the Development of Cancer.** We know that even in those races in whom cancer is otherwise absent, cutaneous cancer may be produced by the application of heat to the skin for long periods of time. **Also, it has been shown that if those races who are normally free from Cancer acquire the habits of civilisation, they suffer from Cancer and from Stasis as frequently as the white race with whom they have associated themselves. It would seem reasonable to conclude that if we were to eat the same food and to occupy the same mechanical relationship to our surroundings as the inhabitants of the Himalayas, we would cease to suffer from disturbances of the gastro-intestinal tract and from what I believe to be the sequel of such disturbances; namely Cancer.** The natives of India afford excellent examples of the truth of this statement. While their diet is limited to corn ground between stones and roasted imperfectly in the form of a cake over the fire, and while their mechanical relationship to their surroundings remains unchanged;

They Are as Free from Stasis and Cancer as the natives of the Himalayas described by Colonel McCarrison, but when they become prosperous and copy the food and acquire the habits of the white man, they pay for the privilege in

the same disastrous manner with equal frequency.

The Factors which make the difference between the cancerous and the cancer free communities are:

1. Diet
2. Habits of Life

The Diet of the Cancer free native, consists chiefly of grain in its crude form and usually imperfectly cooked.

It acts as a vigorous stimulant to the intestine and produces faecal excretions which are abundant, and being soft in consistence do not exert any traumatic effect on the large bowel.

The absence or the limited supply of animal food serves to free the circulation from the toxic material that results from its digestion.

The mechanical relationship of the individual to surroundings would appear to play an important but minor part.

In civilisation the trunk is erect during the day time, while in the native races the resting attitudes assumed are chiefly squatting or recumbent in character.

I need hardly point out in detail here how Chronic Intestinal Stasis produces Cancer; either directly by Traumatism, or indirectly by the deleterious influence exerted on the tissues by the Toxins Circulating in the Blood.

Cancer of the Gastro-Intestinal tract affords a perfect example of the variety which is chiefly traumatic, while Cancer of the Breast is an excellent instance of the degenerative effect of Auto-Intoxication.

I have so recently discussed the subject of The Relation of Cancer to Stasis, very fully, in a paper that it is unnecessary to recapitulate the arguments and evidence here.

> *"The answer to the question forming the title of this communication **clearly depends on how far we can assimilate our diet and habits to those of the cancer free races."***

It is high time that this most important matter should be dealt with on common-sense grounds.

Instead I of employing such simple means, much money and time are being spent uselessly in the pursuit of pathological, bacteriological and chemical details.

Indeed, it seems that the development of special sense entails the loss of common sense.

What I want particularly to call attention to in this communication is:

> ***"The necessary causal relationship between chronic intestinal stasis and all forms of cancer other than the cutaneous varieties which are obviously produced by heat or by some definite mechanical or chemical irritant."***

The clear and precise statement of that most careful and accurate observer, Colonel McCarrison, forms another link in the chain of evidence supporting the views which I have so frequently enunciated as to the part played by Chronic Intestinal Stasis in the Development of Cancer." - Sir W. Arbuthnot Lane, CB, MS, FRCS, in "Is Cancer Preventable?", The Medical Press and Circular, 5 April 1922.

The Relation of Chronic Intestinal Stasis to Cancer

[In this paper the thesis is extended of the influence of intestinal stasis upon the evolution of cancer. The details which the author brings in support thereof add to the accumulating evidence that intestinal stasis cannot be excluded from the cancer problem, at least as a contributory cause, even if no higher claim can be made for it. The importance of this point, furthermore, suggests that patients now alive and well, in whom the stasis had been relieved, might otherwise have become the victims of carcinoma.]

"While much light has been thrown in recent years on some of the problems concerned with the origin of cancer, the actual principles of its causation remain hidden.

Nevertheless certain factors have been definitely shown to be constantly associated with its production in certain special regions.

The chief of these is traumatism, and the evidence of the importance of injury and irritation carried over a long period is too strong to be denied.

Clinically this is best seen in cancer of the tongue and lips, or of the cervix, or even more strikingly in X-ray cancer or the cancer of the skin of the abdomen in the Kashmiris.

That injury alone is not sufficient to produce cancer changes in the tissues is also amply demonstrated, but there is little doubt that in certain situations, at any rate, small and repeated injury is one of the essential factors in producing those changes in growth that result in cancer.

If this is true in certain regions, the question arises as to whether or not such an injury factor is or is not present when cancer occurs elsewhere in the body.

Experiments on Chickens at the Rockefeller Institute showed that cell-free filtrates of growth injected into these animals would reproduce the primary growth, **but that an element of Trauma, provided by mixing the ground-up bodies of diatoms with the filtrate was necessary to cause the appearance of secondary deposits.**

These, and many other facts cause one to ask two questions in regard to Cancer anywhere in the body, namely:

When cancer does occur, has there been Antecedent Traumatism of a chronic kind? and, secondly, **in situations where such chronic Traumatism does exist, is Cancer prone to develop?**

The Gastro-Intestinal Tract provides an excellent field for the observation of the answer to these questions. Cancer of the stomach is a disease of very great frequency. **Virchow stated that 35% of Cancer cases originated in the stomach.**

Haberlin put the figure at 41%, and in the death statistics of England and Wales it is the seat of disease in 22% of the fatal cancer cases.

If we ask the 2 questions noted above in regard to the stomach, the answer to the first one is undoubtedly "Yes", since the stomach is quite obviously the seat of considerable chronic traumatism throughout the life of the individual.

In regard to the second question: we know from the development of Gastric Ulcer that the maximum degree of Trauma occurs in the pyloric half of the lesser curvature, and if that is true we should expect Cancer to develop most frequently in that region, even if not in connection with an actual Gastric Ulcer.

The evidence in favour of the view that Cancer does develop in the site of Gastric Ulcers has steadily grown since Cruveillhier and Rokitansky first put forward that view.

Mayo Robson found a history suggestive of ulcer in 59% of the cases he operated on, Moynihan in 60%, and Sherren in 31 out of 87 cases, while Wilson and MacCarty found naked-eye and microscopical evidence of the same thing in 71% of 153 cases they examined.

Cancer of the Colon is just as striking, if looked at from this point of view.

The nature and situation of the resistance bands which develop in connection with the Colon in Chronic Intestinal Stasis have been described too often to need repetition, but certain facts require to be mentioned in following out the above argument.

The first band to form in this disease, and very often that most fully developed, is the one in connection with the Sigmoid Colon, to which Sir Arbuthnot Lane gave the name of the **first and last kink**, in that it is the first to develop and the last along the course of the bowel.

This kink is the site of greatest obstruction to the passage of the colon contents in many cases, and the mechanical trauma involved in the efforts of the proximal bowel to drive the contents past it must be considerable.

Cancer of the Colon occurs with greater frequency at the site of this kink than anywhere else in the colon. After the last kink, the best developed bands are those which form on the outer side of the caecum and ascending colon, fixing that part of the bowel, and because of their attachment to the front of the gut distorting its lumen. The second most frequent site of cancer of the colon is in the situation of these bands. Again, **in cases of Chronic Intestinal Stasis, it is far more frequently found that the splenic flexure is obstructed by resistance membranes than the hepatic, and cancer of the colon shows similar preference.** Further than this, **in the many patients with Chronic Intestinal Stasis of the type known as "Simple Stasis", in which the resistance of the individual has not allowed him to grow**

resisting membranes, and in which the bowel is loose and atonic, and the patient suffers primarily through ascending infection of the ileum, cancer of the colon is not prone to develop, and conversely this condition is seldom or never observed in patients who are the subjects of Colon Cancer.

These facts drive one to the conclusion that Cancer of the Colon occurs only at the sites of obstruction resulting from the presence of Chronic Intestinal Stasis, and that whatever the other and unknown factor in its causation may be, **Chronic Traumatism plays an Invariable and Essential Role in Determining the Onset of Cancer changes here, Just As It Does In Other And More Obvious Situations In The Body. The chief importance of this fact is that it presents to us another of those Pre-Cancerous conditions, the recognition of which is so essential if Cancer itself is to be dealt with successfully.**

The resistances and obstructions of Chronic Intestinal Stasis must be looked at, not only in regard to their effects upon the evacuations of the bowel, and the General Health of the individual, but also from the view point of being Sites of Chronic Irritation, and therefore Potential Sources of Cancerous Changes.

Not only in its local effects is Chronic Intestinal Stasis A Factor in the Causation of Cancer, but also in its more remote results elsewhere in the body.

One of the most constant and common changes in Intestinal Stasis is that form of Degeneration in the Breast known as Chronic Interstitial Mastitis, which is most prone to develop in the Left Breast, and particularly in its upper and outer quadrant [if the person is Left Handed, it will develop in the Right Brest]. This condition, if untreated, is particularly liable to lead to the presence of cancer, and in some sections cancerous foci can be shown to be developing at several sites in the same organ.

Again, in the biliary apparatus and the pancreas, the inflammatory and tissue changes which result from the delay in the small bowel and the infection of its contents would appear to provide the necessary factor of chronic irritation.

That some other factor besides chronic irritation is necessary for the production of cancer is undoubted, but equally it would appear that cancer seldom, if ever, develops without, in addition to that unknown factor, some Source of Chronic Trauma, or Irritation; either Mechanical or Toxic.

The object of these remarks is to point out that in regard to the Gastro-Intestinal Tract, and many of the Glandular Organs of the body, Chronic Intestinal Stasis and its results Represent the Most Potent Source of such an Irritation, just as external Trauma does in the case of the mouth and skin.

Once That Fact Is Accepted, and The Evidence of it Is To Be Found at Every Operation on Cancer of these regions, it becomes evident how essential it is to understand and treat Chronic Intestinal Stasis in its earliest stages.

Arguments over details of treatment or pathology cannot obscure the underlying principle, which daily becomes more widely accepted, namely, that Chronic Intestinal Stasis and infection play a part in the production of disease in the human body, the importance of which cannot be over-estimated." - Dr E. G. Slesinger, MS, FRCS, in "The Medical Press and Circular", 5 April 1922.

Internal Secretions

"Internal Secretions:

The influence of Endocrines upon overgrowth and the want of them upon under-development are too well known.

They are admitted, and **Endocrines must be regarded with Immense Importance in the study of any form of growth including the Process of Cancer.**

In granting the necessity and compulsion of attributing a contributory influence to the endocrines, it must nevertheless be admitted that there is probably Another Factor (Peripheral Irritation, for example) besides that of internal secretions that may be concerned in the incidence of cancer; and this factor would explain the comparative localised character of the area in which the disease begins. Cancer in mice induced by the application of Tar is an example. In this connection the fact that mechanical irritation can induce frog's spawn to begin active division is of immense interest.

The endocrines may be of fundamental importance in the subsequent development of a normal frog, but the fact remains that mechanical irritation has been proved to be sufficient to initiate the process.

Nervous System:

Where the nervous system shows its influence upon epithelial structures that influence may exercise a nerve control, or want of control, over endocrine action.

It is a remarkable fact that either nerve control or the want of it can induce the spontaneous greyness of hair in people advancing in years, and also in congenital greyness of hair as well in that of early adult life." - Sir G. Lenthal Cheatle, KCB, CVO, FRCS, in "The Cancer Problem", The Medical Press and Circular, 5 April 1922.

Lymph Stasis

"Alterations in regional lymphatic flow may produce dysregulation in skin immune function and consequent oncogenesis. The reason for this probably lies in the impairment of lymph circulation that specifically promotes lymph angiogenesis in addition to causing local immune dysfunction. Furthermore, several other cutaneous malignancies have been reported to appear in the presence of lymph stasis, such as basal cell carcinoma, squamous cell carcinoma, Merkel cell carcinoma, melanoma, malignant fibrous histiocytoma and lymphoma. Further evidence of the oncologic vulnerability of lymphedematous regions ensues from the occurrence of multiple skin malignancies in the presence of lymph stasis. In addition to tumors, even fungal and bacterial infections – including recurrent tinea pedis, erysipelas and cellulitis – often occur on lymphedematous areas. The affected limb becomes a site of opportunistic bacterial and fungal infections due to the surgical cutting of the

lymphatic vessels located adjacent to the great saphenous vein and consequent disruption of lymphatic drainage. Finally, a large number of immune-mediated diseases – such as Sweet syndrome, bullous pemphigoid and toxic epidermal necrolysis – Have Been Reported To Occur selectively on Cutaneous Regions with persistent Lymph Stasis. Disruption of the normal lymphatic flow seems to be the main basic mechanism for a locoregional immune default.

In simple words, Lymph Stasis Functionally means Immune Stasis." - in "Lymph stasis promotes tumor growth", Journal of Dermatological Science, February 2018.

Lymph Stasis Promotes Tumour Growth

"The lymphatic system promotes tumor progression via impaired immune response. However, as pointed out by Valerio et al, **Lymph Stasis is likely to induce immune stasis, resulting in not only enhanced tumor growth but also tumor generation.** In addition, bacterial infections often develop in the lymphedematous lesion, which would be mainly caused by immune suppression **Due to Lymph Stasis. High concentrations of these cytokines and growth factors may be produced in the lymphedematous lesions and might cause generation of skin cancers such as squamous cell carcinoma although how these cytokines and growth factors are produced by lymph stasis** remains unclear.

In addition, in the mouse tail model, **lymphangiogenic factors such as vascular endothelial growth factor (VEGF) – A and VEGF – C have been shown to be produced in lymphostatic lesions which might induce generation of angiosarcoma and Kaposi's sarcoma (frequent malignant tumors arising on lymphedematous lesions).**

Considering the fact that Lymph Stasis may induce malignant tumor generation as well as tumor progression, we should avoid unnecessary lymphatic disruption in any surgeries and carefully consider the flap design to minimalize lymphatic disruption even in cases with benign tumors." - in "Reply: lymph stasis promotes tumor growth", Journal Dermatology Science, June 2018.

Lymph Stasis in The Causation of Disease

"It is important to note that I have said "as a focus", since the presence of caseous material in a gland may, to my mind predispose the individual to attacks of the specific "materies morbi", or germ, otherwise than by taking an active part in the process, though it is probable that sometimes auto-infection takes place.

My observations lead me to believe that it is generally by its retarding effect on the lymph-current of an organ that the caseous gland renders the part depurated specially vulnerable to the attacks of disease germs in general, the bacillus of tubercle included.

This retardation of the lymph-current or lymphstasis.

If the patient eventually recover from the acute stages of the more Pneumonia or less adhesion of the surface or possibly an empyema may result.

The tendency being for chronic pleuritis to set up a fibrosis of the surface there will be more or less complete arrest of lymph and waste products within the lung. The late Dr Moxon has published an interesting case of surcharged lymphatics (Transactions of the Pathological Society of London, vol. xxiv).

On reviewing the abstracts it will be found that it is under such conditions as these that cavities are most frequently found.

It would appear that tubercle may be either an early **or a late feature.**

In some cases it appears to be quite secondary to the fibroid changes and excavation, whilst in others cavities appear to form by the massing of tubercle simply, when they are usually small, smooth-lined, and multiple, being due probably in the first instance to mere yielding of tissue from retention of fluids, and not to a necrobiosis.

As the lymphatics become further charged with lymph-elements fibroid changes arise, and the tissue readily undergoes ulceration, whilst the walls of the cavities become ragged.

Tubercles frequently develop in various organs during the last days of an illness, and particularly if the patient be already the subject of tubercle in some other organ. But it is especially in parts, such as near the diseased bronchial glands, where a certain degree of lymph stasis may be presumed to be present, that this late form of tuberculosis is apt to arise. The same remark applies to instances of recent tubercle developing in the vicinity of caseous deposits other than those met with in the lymphatic glands.

My observations lead me to believe that **a certain degree of stasis of lymph is necessary in order that tubercle may develop, and that this stasis is engendered by various conditions, most important because most directly effectual, being caseous disease of the lymphatic glands related to the part in which the tubercle appears. The occurrence of tuberculosis is not usually the primary effect of lymph-stasis. Non-absorption of lymph precedes it, and this lymph may be the result of an acute inflammation.**

One can readily understand how the cells lining the lymphatics will be the first to suffer from lowered nutrition when retardation of lymph occurs.

The bacillus of tubercle appears to have its seats of election like other specific germs, but **the possibility of its growth depends**, so far as my observations lead me to believe, **upon a certain degree of lymph-stasis.**

This condition, as I remarked before, is obviously much more readily induced in some organs than in others. **Tuberculous ulcers of the intestines are always found associated with caseous mesenteric glands.**

The latter, however, may be far advanced in disease whilst the associated ulcers sometimes appear not to be of long standing.

Where only 1 or 2 mesenteric glands are diseased and situated at a distance from the bowel this is more likely to be the case than where several glands are affected or situated near the gut, as is the group related to the lowermost portion of the ileum. These facts are explained by the assumption that the lymph in the former case has greater facility for escape than in the latter.

Tubercles will often be found m studding the lymph channels only the vicinity of ulcers or between them and the associated diseased glands.

The muscular structures do not allow of stasis of lymph though their proper muscular fibres may be affected as regards nutrition by reason of imperfect removal of waste products; whilst the bones, not being subjected to compression, afford facilities for lymph-stasis.

The apices of the lungs are affected more than the bases, probably on account of the former being less subjected to the expiratory compressing influence of the chest and abdominal muscles.

Now, **if Pneumonia have supervened the lymphatics will be overladen with lymph and much "choking" of the glands will arise from the cough.**

It is under these conditions that we meet with the much enlarged, softened, bronchial glands, which are supposed subsequently to undergo caseous change.

If no broncho-pneumonia exist in whooping-cough cases the glands will be found quite small and the lungs highly emphysematous usually.

The pneumonia of whooping-cough, together with that of measles, scarlatina, and diphtheria, is very prone to resist all attempts at cure and to undergo acute softening or chronic degenerative change, all of which owe their non-resolution to the extensive implication of the bronchial glands often met with in these diseases. I have sometimes observed at post-mortems on such cases that the pneumonia was commencing about the roots of the lungs.

I surmise that; **these damaged bronchial glands afford specially favourable conditions for the growth of the bacillus of tubercle.**

Whilst **lymph-stasis appears to be a necessary antecedent condition for the development of the bacillus of tubercle within the organism**, my observations also point to such a condition favouring attacks of other specific microbes.

For instance, whooping cough tends to follow measles quickly, and diphtheria supervened in some of the cases of caseous glands noted in the abstracts. In both of these instances we may suspect some lymph-stasis to be a predisposing factor.

One word may be said with regard to inflammation. Its clinical features will depend upon the specific cause in each case, as well as the constitution or state of health of the individual at the time of its onset.

Waste products, unless speedily carried away by the blood-vessels and lymphatics, will cause a "choking" of the lymph-glandular system related to the inflamed area. If the lymphatics be functionally adequate little harm will probably arise as the result of the inoculation, but when the reverse obtains many specific organisms will find a congenial soil for their growth." - Dr Wayland Charles Chaffey, MD in "Lymph-Stasis, or Retardation of Lymph, as an Element in the Causation of Disease", 1890.

The Relation of Obstructed Cardiac Circulation to Lymph Stasis

> *"Obstructive engorgement of the great veins extends also to the thoracic duct. When the subclavian vein is filled to distension, the flow of chyle and lymph must encounter a resistance equal to that opposed to the current of any other vessel which empties into the subclavian. Nay, if lymph be the source of the fibrin in the blood, we see, upon simple physical grounds, why the blood of emphysematous patients is poor in fibrin, why the venous crasis presents hyperinosis and increase of fibrin.* ***Restricted afflux of chyle must, moreover, prejudice nutrition both of the blood and of the entire organism. It is one of several causes which contribute to the general emaciation and to the premature marasmus of emphysematous persons; perhaps, too, it may account for the lack of albumen in the serum of the blood, which produces a tendency to the establishment of dropsical symptoms."*** *- Dr Felix von Niemeyer, MD, in "Text-Book of Practical Medicine", 1884.*

> ***"The inadequate emptying of the thoracic duct into the left subclavian vein, over-distended with blood, will, in cases of pulmonary emphysema, lend to impoverishment of the blood in so far as concerns such elements as are derived from the lymph, the colorless blood-corpuscles, fibrin, and albumen."*** *- Hertz, in "Cyclopædia of the Practice of Medicine", 1875.*

"The preceding citations of the experimental and clinical data establish, inferentially if not conclusively, the preliminary proposition, that retardation or arrest of the current of the fluid in the thoracic duct at or near its outlet into the subclavian vein may produce dilatation, distension, and rupture of lymphatic vessels, and consequent effusion of chyle and lymph into the serous cavities.

The remoteness of the effects from the obstacle interrupting the current of the fluid may depend upon various concomitant conditions, especially upon the anatomical integrity and the tensibility of the vascular walls.

When the impediment to the flow of chyle and lymph occurs at or near its outlet the area of stasis and ectasis would necessarily depend upon the duration and extent of such obstacle; and, hence, when the area of ectasia is extensive the manifest inference is that the cause has been one of gradual development and protracted duration.

It remains now to show that such diseases of the heart as slow, impede, or stagnate the venous blood-current in the left subclavian or innominate vein, may also produce lymph-stasis.

Petters reports a case of **lymphangiectasis in which were found upon the visceral peritoneum numerous cysts from the size of peas to that of filberts, some colored bright, and containing serum.**

Upon the small intestines numerous lenticular protuberances, transparent, and filled with wine-yellow fluid. The glands of the right inguinal region were transformed into cysts of small walnut size, filled with wine-yellow fluid.

From the inner wall of these cysts extended dilated lymph-vessels of crow-quill size, which connected the cysts with each other, so that a dilated vas efferens and afferens could be seen in each cyst. Upon puncture a yellowish fluid spouted from these cysts in a jet of several inches.

The lymph-vessels and cysts formed a mass which it was difficult to unravel. The lymph-vessels in the vicinity and the thoracic duct were greatly dilated.

Retardation of the venous current near the heart, and consequent repletion and distension of the thoracic duct and receptaculum, would assuredly offer resistance to the movement of the lymph in affluent vessels.

The assumption that the engorgement could have been due to devastated inguinal glands, or occluded lymph-vessels in the abdominal cavity, is discredited by the appearance of the intumescence first about the ankle, nod its gradual and continuous extension upward; whereas, if either of those conditions had existed, the lymph-stasis would have begun at the locality of such obstruction and extended in the reverse direction.

Lymphatic engorgement does not follow the law of symmetry, and its limitation to one lower extremity may be ascribed to any one or more of the variety of circumstances, such as the varying tensibility, location, distribution, or the anastomosing connections of the lymph vascular system of the lower extremities.

The explanation of this relation of cause and effect between Cardiac Disturbances and Lymph-Stasis must, in a general way, be sought in the varying conditions of blood-pressure.

A potential, if not the predominant factor concerned in the locomotion of the lymph is the difference between the arterial and venous blood-pressure; the greater this difference the more rapid the movement of the lymph.

In a normal condition of the heart, venous orifices, nod great afferent and efferent vessels, the blood-pressure in the innominate veins and their affluent branches, during diastole, is at its minimum-represented in comparison with the pressure at the aortic summit, as nil; so that, whatever may be the potentiality of the difference between the arterial and venous blood-pressure as a force in promoting the locomotion of the chyle and lymph, it is at its maximum when the venous blood-current is flowing most easily and rapidly into the right auricle." - Dr Samuel C. Busey, MD, in "The causal relation of obstructed cardiac circulation to lymph stasis", The American Journal of the Medical Sciences, 1 October 1885.

Lymph Stasis the Precursor of Cancer

"I propose to use my opportunity to-day for the purpose of laying before you my views on the origin and causation of cancer. Chronic Irritation in various forms has succeeded in artificially inducing cancer; and Menctrier's belief that cancer is a morbid process resulting from "multiple and non-specific forms of irritation" is thus justified. The anatomist, the physiologist, and the biochemist, and I would add the physician, have devoted too little attention to the Lymphatic System. In conclusion, I do not want a tombstone, but neither am I content to lie under the green turf of oblivion.

I would like to be remembered for 2 things:

1. As having shown 25 years ago that cancer spreads mainly by lymphatic permeation;

2. As having demonstrated to-day the importance of lymph-stasis in its etiology." - Dr W. Sampson Handley, MS, MD, FRCS, Surgeon to the Middlesex Hospital and to its Cancer Charity, in "British Medical Journal", 5 October 1929.

Cancer is a Product of Lymph Stasis

"Local Lymphatic Stasis brings about a definite rupture of the contract in virtue of which the unicellular organism originally forswore its egotism and became a social unit. Or, in the terms of biochemistry, the epithelium covering the papilla is deprived of the supply of growth-inhibiting substance, which in a well-connected cell community is circulated to every cell.

I have shown that local lymphatic obstruction must seriously reduce the supply of oxygen to the epithelium of the blocked papilla.

It would not be surprising if, in the course of years, the-affected epithelium, adapting itself to meet this difficulty, should acquire a type of metabolism in which oxygenation played a relatively subordinate part.

In remarkable accord with the view that lymph-stasis is the great general physiological factor which lays the foundations of cancer, is the flood of evidence coming from many quarters that papilloma or adenoma is the precursor of carcinoma of every variety. If, as I maintain, the papilloma or papillary adenoma is the characteristic product of local lymphatic obstruction, we are getting near to the conclusion that all carcinomas are the result of local lymphatic obstruction. The mysterious action of such varied Chronic Irritants all producing the same final result receives for the first time an intelligible explanation. They act by setting up a local chronic obstructive lymphangitis of the part to which they are applied, which leads after a time to the production of warts, or adenomata, and after a further interval to the genesis of a carcinoma." - Borst in "Die Lehre von der Geschwulten", emphasizes the role played by

irritation in the causation of papilloma, so that some of them are rightly described as inflammatory. The recurrence of papillomata is more simply explained as due to persistent residual infection of the lymph-vessels of the part.

Borst, in describing warts, refers to the appearances in the dermis as follows:

"An inflammatory cell-infiltration of the papilla: and of the underlying connective tissue of the corium is present." - Dr W. Sampson Handley, MS, MD, FRCS, Surgeon to the Middlesex Hospital and to its Cancer Charity, in "The Role of Lymph Stasis in the Genesis of Cancer", Annals of Surgery, 1 January 1931.

Breast Cancer

> ***"I have no doubt whatever, that these degenerated breasts are very liable to develop cancer. I have found multiple foci of cancer in such degenerated breasts in cases of Chronic Intestinal Stasis*** *in which there was no reason whatever to suspect their presence." - Sir Arbuthnot Lane*
>
> ***"The most important factor in the production of Breast Cancer appears to be Chronic Mastitis."*** *- Dr W. Sampson Handley, MS, FRCS, in "A System of Surgery", 1912.*
>
> *Please note this Chapter appears in the Book "Medicine: The Lies, The Greed & The Death, The Effects of The Medical Trade, & The Pharma Industry On Your Health", 2020.*

"Perhaps nothing is so surprising as the remarkable and prolonged benefit that will frequently follow an operation on an irremovable carcinoma of the bowel by the complete diversion of the faecal stream from it.

One has also to realise in performing short-circuit operations that life can be carried on in apparently perfect health with only a short length of small intestine.

The surprises which extensive operative measures may afford are often extraordinary, and unless there is evidence of secondary growth in important organs there is practically no limit to the field of operation.

No procedure should be considered too radical or too extensive in cases in which adjacent viscera have become involved in the growth, and the more familiar the surgeon is with intestinal surgery the more readily will he carry out operations on conditions which may at first sight appear to be hopeless and inoperable.

Only on one single occasion have I excised the large bowel in its entirety.

The operation was done on a patient who appeared to have a malignant growth obstructing the iliac colon. Eleven years previously her left breast had been removed for cancer. On opening the abdomen a mass was seen obstructing the iliac colon.

It was peculiar in that it did not surround the bowel, but invaded it along its mesenteric attachment. While freeing the diseased bowel I found that a similar growth extended in varying amounts along the entire mesentery of the large bowel, even into the pelvic colon.

I therefore proceeded to remove the entire colon including the anal aperture.

The end of the ileum was then sewn to the margin of skin which originally surrounded the anal orifice." - Sir William Arbuthnot Lane, MS, in "The Lancet", 11 December 1920.

Lymph-Stasis the Precursor of Cancer

> ***"I have just read your very interesting address on "Lymph-Stasis the Precursor of Cancer." It appeals to me as the most reasonable and almost certain paper on the origin of cancer that I have ever seen. All others are guess work. Here is a series of facts observations which cannot be disputed."*** *- Professor W. W. Keen, MD*

"In a paper "Lupus in its Surgical Aspects", Annals of Surgery, January 1925. I showed that tuberculous lupus is essentially a chronic tuberculous lymphangitis of the lymphatic system of the skin.

For years the epithelium in lupus plays only a passive role.

It may be destroyed as in ulcerative lupus, but in the non-ulcerative form of lupus it gives no particular early sign of reaction.

At the edge of an area of non-ulcerative lupus the earliest change seen is that the lymphatic vessel of each papilla is replaced by a solid cord of proliferated endothelial cells.

The appearance of cancer upon an area of old lupus is invariably preceded by such local warty thickenings of the epithelium." - Dr Sampson W. Handley, MD, Surgeon to the Middlesex Hospital, London in "The Role of Lymph Stasis in the Genesis of Cancer, The Evidence of Lymphangitis in Papillomata", Annals of Surgery, January 1931.

> ***"Sir Arbuthnot Lane, eminent London surgeon, has lately called attention to the influence of Intestinal Toxaemia resulting from Constipation in causing Cancer of the Breast and other organs. Dr Lane believes that Constipation and the Toxaemia resulting from putrefaction in the colon is the chief cause of cancer."*** *- James Empringham, in "Intestinal Gardening for the Prolongation of Youth", 1938.*

Lymphoid Tissue In Health

“The designation “lymphoid” is applied to a complex of tissues scattered throughout the body. Since the classical work of his in 1860, much has been written concerning this tissue aggregate.

The Lymphoid Tissues are not concentrated into one organ, but are widely diffused throughout the body. Consequently the methods of direct experimental attack, involving complete extirpation, are inapplicable.

Indirect methods of extirpation, such as exposure of the animal to x-rays, are not sufficiently selective to be of value.

Failing the experimental approach we have been compelled to fall back upon a clinical and pathological study of the problem.

Here, unfortunately, both the clinician and the pathologist, looking at the Lymphoid Tissues from their own special angle, have combined to draw a particularly bright red herring across the-trail.

The clinician and the pathologist have repeatedly observed that Lymphoid Tissues are often the seat of secondary inflammation or malignant deposits.

They have therefore assumed that lymphoid tissue exists for that very purpose, serving as a barrier which holds up for a time, at any rate-the spread of injurious matter.” - Dr J. M. Yoffey, MD, FRCS in “The Problem of Lymphoid Tissue”, BMJ, 10 December 1932.

Lymphangioplasty

A new method for the relief of the brawny arm of breast-cancer, and for similar conditions of lymphatic Oedema

“Among the complications of breast-cancer none is more terrible than the brawny swelling of the arm which frequently comes on in the later stages of the disease.

The pain to which it gives rise is so excruciating that amputation has been suggested and frequently carried out for its relief.

Incisions into the swollen limb have been employed with temporary benefit.

Apart from actual pain and consequent insomnia the discomfort and misery produced by the constant leaden drag of the paralysed, inflexible, and bolster-like limb are important factors in the sum total of misery produced by the disease.

The brawny arm occurs in about 1 case out of every 6 of Breast-Cancer.

Mr. T. W. Nunn, FRCS (Cancer, p.23, 1899) has maintained that **the brawny arm results from the obstruction of the main Axillary Lymphatics by growth within them.**

This view is doubtless a part of the truth, but it fails to explain why no collateral lymphatic circulation is established to carry on the lymph circulation in the arm.

The answer to this question is a corollary to the permeation theory of dissemination in carcinoma.

I may be permitted to recall the main outlines of this view of dissemination, which was stated for the first time in my Hunterian lectures for 1905, and more fully in my recent work on breast cancer (Cancer of the Breast and its Operative Treatment, 1906).

The permeation theory has won such wide acceptance at home and abroad that it may be said to have almost supplanted the embolic theory of dissemination.

Indeed, in breast-cancer, **the evidence for permeation is so strong that the word "theory" is entirely out of place.**

When a carcinoma originates, its cells for a time spread by pushing their way into the intercellular lymphatic spaces of the surrounding tissue.

This process is known as infiltration.

Soon, however, the cancer cells penetrate into the small lymphatic vessels which open out of the lymphatic spaces.

Within these vessels the cancer cells find less resistance than in the tissue interspaces, and they commence to spread centrifugally in all directions from their point of origin by actually growing along, and filling up, the lymphatic plexus to which they have obtained access.

This process of permeation may slowly spread in a circle any distance up to a maximum of about 61 centimetres from its point of origin.

It is doubtful if the process of permeation can so completely obstruct the lymphatic vessels as to cause lymphatic oedema.

But I have been able to show that a permeated lymphatic is ultimately doomed to destruction by a process which must be included among the reparative efforts of the body against carcinoma.

This process may be called peri-lymphatic fibrosis and it takes place as follows.

The plug of cancer cells within the lymphatic, continuing to proliferate, finally a splits up the lymphatic. Around the microscopic trauma thus produced a vigorous round-celled infiltration occurs, to be replaced later by a capsule of newly formed fibrous tissue, which contracts upon, and ultimately strangles, the inclosed cylinder of cancer cells. The original lymphatic vessel is replaced by a solid, microscopic, fibrous cord, and the process of peri-lymphatic fibrosis is complete.

It thus became evident that the permeative spread of a cancer is accompanied by an almost co-extensive destruction of the lymph-vascular system.

The recognition of this fact provided for the first time an adequate pathology for the swollen arm of breast-cancer. The circle of permeation, spreading from the breast in the plane of the deep fascial lymphatic plexus, sooner or later reaches the arm and begins to travel down it.

After permeation has involved the whole circumference of the arm and has been in turn succeeded by the obliterative process of peri-lymphatic fibrosis, and if, as generally happens, **the trunk lymphatics are obstructed by growth of embolic origin in the axillary glands, the arm is utterly cut off from the lymph-vascular system.** No collateral circulation can be established, and the lymph can only return imperfectly by percolating the tissue interspaces.

The swollen arm of breast-cancer is thus a direct consequence of the actual and complete severance of the lymph-vascular system of the limb from that of the trunk by the conversion of the connecting lymphatics, small and large, into solid cords of a fibrous tissue. The change affects first and mainly the lymphatics of the deep fascial lymphatic plexus. This case, like the former, exhibited within a day or two a remarkable diminution of the tension of the arm and commencing subsidence of the swelling.

The patient is already entirely free from nocturnal pain and insomnia." - Dr W. Sampson Handley, MS, FRCS, in "Lymphangioplasty: A new method for the relief of the brawny arm of breast-cancer, and for similar conditions of lymphatic Oedema", The Lancet, 14 March 1908.

Lymph-Stasis
The Precursor of Breast Cancer

"In the case of the breast the appearance which Lenthal Cheatle calls the "laciform edge" is a diffuse papillomatosis of the smaller ducts.

He points to this appearance as a precursor of malignancy.

Nearly every case of breast carcinoma originates in the ducts.

Duct papilloma of the breast is recognized clinically when it arises in the larger ducts and causes serous or blood-stained discharge from the nipple.

Such cases, if neglected, are known to end usually in carcinoma.

I was able to demonstrate the occurrence of carcinomatous degeneration in a duct papilloma of the breast, which had apparently only existed for a very short time. At the time of the operation the papilloma was suffering from carcinoma, but the disease had not yet attacked the tissues of the patient herself.

These are exactly the appearances given by blocked lymphatics which have lost their lumen by proliferation of their endothelium, as I know from my experience of lupus and elephantiasis.

In other words, the patient had suffered from a chronic lymphangitis of the tissues of the breast, and it appears highly probable that the resulting lymph-stasis was one of the main exciting causes of the papilloma which so rapidly developed into a potential carcinoma.

May not mild, undetected tuberculous infection of the mammary glands in childhood leave behind them areas of lymph-stasis which give rise in middle life to duct papillomata and carcinoma of the breast?" - Dr W. Sampson Handley, MS, FRCS, Surgeon to the Middlesex Cancer Hospital, London, in "Lymph-Stasis The Precursor of Cancer", The Canadian Medical Association Journal, Vol.XXI, Nov. 1929.

Lymphatic Obstruction as the Cause of Chronic Mastitis

The pathology of chronic mastitis, and its relations to cancer of the breast.

Reference must be made to the work of **Dr William Francis Victor Bonney, FRCP, who found traces of chronic mastitis in all the early-breast carcinomata he examined.**

"Multiple and alternative chains of causation will be found to converge to a single line of links which leads through local lymphatic obstruction, often manifested by papillomatous hypertrophy, and certain consequent metabolic changes to the onset of a carcinoma, and that not otherwise can a cancer be produced. **The lymph-stasis theory of the genesis of cancer denies neither the infective nor the irritation theories.** It reduces them in rank and absorbs them in a larger generalisation. It denies the existence of any one specific cancer organism or parasite, and asserts that the cancerogenic action of irritants upon the epithelium is exerted indirectly through the obstructive lymphangitis they set up in the lymphatic vessels of the sub-epithelial connective tissue." - Dr W. Sampson Handley MS, FRCS, in "The Genesis of Cancer", 1931.

Chronic Mastitis

"A study of the physiology of the breast shows that nature's method of inducing proliferation is to pour out an excess of lymph into the tissue interspaces, and provides further evidence of the important part played by lymph stasis in physiology and in the genesis of cancer. **The recurrent monthly physiological lymph stasis which occurs in the breast temporarily stimulates the proliferation of all its tissues.** If lymphatic return from the breast is hindered by local areas of lymph obstruction, the stimulus of lymph congestion instead of being periodic becomes permanent. The lobe whose duct has thus been infected is unable to empty itself of lymph, and receives a permanent stimulus to proliferation.

The lymphatics are blocked by proliferation of their own endothelium.

The ducts are surrounded by a sheath of adventitious fibrous tissue due to proliferation and blocking of the periductal lymphatics. Papillomata appear within them as the nutritional stimulus begins to affect the epithelium, and finally carcinoma may supervene. **A local factor must be present, is permanent lymph stasis. The various steps which lead from lymph stasis through chronic mastitis to cancer may be easily demonstrated histologically.**

Congenital moles in which developmental defects of the lymphatic system lead to local areas of lymphatic obstruction and papillomatous hypertrophy, and sometimes to carcinoma or sarcoma.

Prevention in the Light of Aetiology

The prevention of cancer is to maintain the lymphatic circulation throughout the body in a state of high activity. It is a well known that Cancer is relatively infrequent in wild animals, due to an active life, which results in a vigour of lymphatic circulation. Even in local areas of lymph stasis a sufficient minimum flow may thus be secured to avert a threatened carcinoma.

E. H. Starling, **showed a resting limb produces hardly any lymph.**

Civilised man is apt to overstrain his glandular mechanisms, especially those of digestion, while at the same time he allows his muscles to fall into disuse.

Glandular secretion increases the production of lymph without doing anything to promote the lymphatic circulation.

Muscular exercise on the contrary brings into play all the forces which maintain the lymphatic circulation, the pulsation of adjoining arteries, the Massage action of muscular contraction and of bodily movements, and the aspiration effects of deep respiration.

Thus, regular exercise and moderation in eating, stave off cancer, but a heavier stress must be laid on the avoidance of infections and their prompt treatment, **for the small local areas of lymph block in which cancer arises are most often due to bacterial infections,** severe or slight.

In this connexion Dental Infection requires special stress, for as F. St. J. Steadman showed: Cancer of a Dentally Clean Mouth is a Rarity." - Dr W. Sampson Handley, FRCS, in **"The Prevention of Cancer"**, The Lancet, 2 May 1936.

The Real Story Behind the Pink Ribbon

Charlotte Hayey, who had battled breast cancer, introduced the concept of a peach-colored breast cancer awareness ribbon.

In the early 1990s, the 68-year-old Haley began making peach ribbons by hand in her home. Her daughter, sister and grandmother also had breast cancer.

Haley was strictly grassroots, distributed thousands of ribbons and cards out at the local supermarket, and writing prominent women, everyone from former First Ladies to Dear Abby.

Her message spread by word of mouth, her cards read:

> *"The National Cancer Institute annual budget is $1.8 Billion USD, only 5% goes for cancer prevention. Help us wake up our legislators and America by wearing this ribbon."*

As the word spread, executives from "Estée Lauder" and "Self Magazine", asked Haley for permission to use her ribbon. Haley refused saying the companies were too commercial. But "Self Magazine" really wanted to have a ribbon.

The magazine consulted its lawyers and was advised to come up with another colour.

It chose pink, a colour that focus groups say is soothing, comforting and healing, a far cry from what breast cancer really is. Soon Charlotte Haley's grassroots peach ribbon was history, and her original idea became the pink ribbon that has come to be known as the worldwide symbol for breast cancer.

In 1936, Dr W. Sampson Handley, FRCS, in "The Prevention of Cancer", The Lancet, pointed out the cause of Breast Cancer stating:

> ***"A local factor must be present, is permanent Lymph Stasis. The various steps which lead from Lymph Stasis through Chronic Mastitis to Cancer may be easily demonstrated histologically".***

> ***"The degree of malignancy, in which the nearest chain of lymphatic glands is infected with the morbid growth, offers also some points for consideration****; in the first place, it is to be noted that the disease occurring in the glands is invariably of the same nature as that of the primary tumour from which the infection has spread. In all the cases which I examined this has been the case, and I have not met with a single reported exception to the rule which has borne the test of careful scrutiny.* ***It is very seldom possible to trace the morbid elements extending along the lymphatic vessels.*** *I have seen two cases in which the lymphatics were visibly distended with what seemed to be cancerous material;* ***once leading from a scirrhous breast to the axillary glands,*** *and another time stretching away from a soft cancer of the uterus." - Dr Henry Arnott, FRCS in "Cancer; its Varieties, their Histology and Diagnosis", 1872.*

> ***"Cancer of the breast occurs largely among civilized women. In those countries where breasts are allowed to be exposed, that is, are not compressed or irritated by clothing, it is rare."*** *- Dr. John Mayo, MD in "Susceptibility to Cancer", Minnesota Medicine, Vol.13, 1930.*

> *"Even in the proper breast size, most brassieres envelop or bind the breast in such a fashion that normal circulation and freedom of movement is constricted.* ***Many cases of breast cancer have been attributed to such breast constriction as caused by improperly fitted brassieres."*** *- in a Bra patent, 1950.*

> *"Lymphatics of the Breast -* ***The network of extensively communicating small lymphatic vessels from both the overlying skin and parenchyma of the different regions of the mammary gland.*** *These vessels join into several collecting ducts that are connected to specific lymph nodes within each separate lymph node basin.* ***This broad anatomical concept originates from the numerous lymphatic drainage patterns that have been observed during lymphatic mapping of breast cancer.***

A centripetal lymph flow from the mammary ducts to a common subareolar plexus. From this lymphatic plexus, a medial and a lateral collecting vessel were assumed to pass to the axilla. This system was suggested to have multiple anastomoses with a superficial system consisting of dermal lymphatics from the upper anterolateral chest wall, which also drain to the axilla. Posterior lymphatic network of the breast - This posterior network, which was originally described at the end of the 18th century, mainly drains to the internal mammary chain and to interpectoral lymph nodes. Collecting lymphatic vessels at the posterior aspect of the breast draining to these lymphatic basins may be encountered in blue-dye mapping during mastectomy." - Dr P. J. Tanis, MD in "The Anatomy and Physiology of Lymphatic Circulation", 2013.

"The problem caused by bras is due to their constriction of the breasts, particularly of the lymphatic system, which is responsible for eliminating toxins, cancer cells, bacteria and cellular debris from the breasts. The lymphatics are an essential circulatory pathway of the immune system. Constrict lymph vessels with tight bras, and the result is lymph fluid congestion in the breasts, or lymph stasis, along with tissue toxification. This can cause breast pain and cysts. Over time, as the breasts progressively become toxic from impaired lymphatic drainage, cancer could result." *- Sydney Ross Singer, Medical Anthropologist in " How Bras Cause Lymph Stasis and Breast Cancer", 2019.*

"The impairment of lymph circulation that specifically promotes lymph angiogenesis in addition to causing local immune dysfunction. Furthermore, several other cutaneous malignancies have been reported to appear in the presence of lymph stasis, such as basal cell carcinoma, squamous cell carcinoma, *Merkel cell carcinoma, melanoma, malignant fibrous histiocytoma and lymphoma." - De Vita Valerio, MD and Ruocco Eleonora, MD in "Lymph stasis promotes tumor growth", Journal of Dermatological Science, 2018.*

"In addition, bacterial infections often develop in the lymphedematous lesion, which would be mainly caused by immune suppression due to lymph stasis. Considering the fact that lymph stasis may induce malignant tumor generation as well as tumor progression, *we should avoid unnecessary lymphatic disruption in any surgeries and carefully consider the flap design to minimalize lymphatic disruption even in cases with benign tumors." - N. Yoshiyuki, F. Yasuhiro, O. Naoko, W. Rei, T. Ryota, I. Yosuke, T. Hideaki, F. Manabu, in "Reply: Lymph Stasis Promotes Tumor Growth", Journal of Dermatological Science, 2018.*

“[Osler with a patient] An old woman of 75 in hospital for Acute Rheumatism, who also showed a wind tumor of the Steno's duct the size of a walnut, which she could inflate and deflate at pleasure.

Osler said it was the second one he had seen.

Both of these conditions, however, were incidental to her general history.

- Mother (said Osler) I would like you to tell Dr Walsh something about your past life. When were you first in hospital?

“At 27.”

- What was the matter?

“I had a sarcoma of the right knee”

- What did they do for it?

“They cut off the right leg at the hip.”

- Did you get entirely well?

“Yes, entirely well.”

- When were you in again?

“At 42. I had cancer of the breast. They cut off the left breast and the left arm. After that I was entirely well.“

- What are you in the hospital for now?

“For rheumatism; and Doctor” (she said with tears in her voice and catching his hand) “I hope you will make me well in a hurry, because I have to go home to take care of my grandchildren.”

Osler, in short, never forgot the patient in his interest in the malady.” - Harvey Cushing, in “The Life of Sir William Osler”, 1940.

Lymph Stasis is thus recognized as the Main Risk Factor, in causation of Breast Cancer. In other words Lymphatic Stasis is a recurrent precursor to Breast Cancer.

Note on Antiperspirants

Aluminium-containing antiperspirants prevent toxins from being expelled by the body.

The exposure leads to the absorption of any toxins that antiperspirants have, clogging up the lymph nodes around the armpits, such as the axillary lymph nodes, which are connected to the breasts, thus transporting this same toxins, these may aid or contribute, in the establishment of lymph stasis.

Thus the solution here should be to have more baths and showers.

Breast Cancer Screening Farce

“The philosophy of breast cancer screening is based on wishful thinking that early cancer is curable cancer, though no one knows what is “early”.

Unable to admit ignorance and defeat, cancer propagandists have now turned to blaming the victims: they consume too much fat, they do not practise breast self-examination, **they succumb to "irrational" fears and delay reporting the early symptoms.** It would appear that no woman needs to die of breast cancer if she reads and heeds the leaflets of the cancer societies and has her breasts examined regularly. Adherence to these myths and avoidance of reality undermines the credibility of the medical profession with the public.

> ***"Early" intervention as the only hope for cure means little in practice. If "early" means visible, palpable, or symptomatic, then, clearly, it is too late, 20% of "occult" cancers, detectable only by mammography, had metastasised to the axilla."*** *- in "The 1982 National Survey of Carcinoma of the Breast in the United States by American College of Surgeons", Surg Gynecol Obstet, 1984.*

It is unacceptable to remove breasts on the basis of theoretical speculation. The earliest possible intervention is removal of a healthy breast. **The belief that the fewer organs we have the less likely we are to die is "Reductio Ad Absurdum".**

The logic of breast cancer treatment, or rather the lack of it, can be illustrated by an imaginary dialogue (inspired by Kardinal and Yarbro, in "A Conceptual History of Cancer" 1979) between a Dogmatist, shielded by "conceptual rationalisation" (brilliantly exposed by Baum in "Scientific Empiricism, and Clinical Medicine", Journal Royal Society of Medicine 1981) and an Empiricist who judges the theory by its fruits:

Dogmatist: Early detection is surest protection.
Empiricist: From what?

Dogmatist: From dying of disseminated cancer.
Empiricist: We know that breast cancer disseminates long before it is clinically detectable.

Dogmatist: Early cancer is a localised disease.
Empiricist: Why then do even your Stage I patients succumb if they are followed for long enough?
Dogmatist: They either get a new breast cancer or they were wrongly staged. I never take chances and, like Halsted, I cut it all out.
Empiricist: But Americans have just shown that radical mastectomy is no better than simple mastectomy.

Dogmatist: If you read the reports carefully you will know that with simple mastectomy they irradiated the axilla or used chemotherapy.

Empiricist: Existing evidence shows no benefit from radiotherapy or chemotherapy on mortality rates.

Dogmatist: My dear friend, you are a therapeutic nihilist. To cure cancer, surely, all cancer cells must be removed, first by radical surgery, and then by chemotherapy and radiation to gobble up the occasional cell which has gone astray.

Empiricist: But it does not cure the patients.

Dogmatist: I have always maintained that early detection is the only sure protection.

Empiricist: Against what?

Dogmatist: Exits, slamming door." - Dr Petr Skrabanek, MD in "False Premises and False Promises", 2000.

Intestinal Toxaemia in its Relation to Cancer

"Intestinal Toxaemia is no new subject. For the past 100 years an enormous amount of work has been expended upon it, both medically and surgically, in an effort to counter its ill effects, and even back to the early days of our profession we find treatment and drugs which had as their object, their one and main object, the cleansing of the bowel. But as the importance of this condition is being recognized, and as further work is being done, so we are better able to understand the details of its nature and the more exact conditions by which it obtains its deleterious results. **The powerful and far-reaching effects of Intestinal Toxaemia are as yet only beginning to be understood.** Its wholesale ravages upon civilization, ravages the more difficult to understand because of its insidious nature, have yet to be realized. The sure, steady lowering of resistance, and the predisposition to disease, and the benefits that accrue from its removal, in the vast majority of all diseases, is yet to be appreciated by the profession. The primary cause of this abnormality is essentially diet, and secondly, infection, which is able to take place only through incorrect food." - Dr Edward Bach, MD in "British Homoeopathic Journal, October 1924.

> ***"Perhaps Professor James Eustace Radclyffe McDonagh, FRCS was right, after all, when he wrote: "Over £4 Million pounds have been wasted upon cancer research when the nature of the condition should at all times have been obvious*** *and its prevention solely a matter of proper living." - in "Hearings Before the Subcommittee, Public Health, Hospitals and Charities, Committee on the District of Columbia, House of Representatives, January 1938.*

Constipation and Breast Cancer

"Diet may contribute to the cause of Breast Cancer, and Benign Breast Disease since the bacterial flora of the large intestine can transform endogenous and exogenous sterols and fatty acids into a variety of metabolites, including polycyclic carcinogens and mutagens. In addition, faecal microorganisms have been shown to metabolise oestrogen sulphate and glucuronide conjugates.

We have shown that the non-lactating breast actively takes up and secretes into breast fluid chemical substances from the blood. We report our preliminary findings on epithelial dysplasia in nipple aspirates of breast fluid in relation to bowel function." - Dr N. Petrakis, MD, Dr Eileen King, MD, Department of Epidemiology and International Health, University of California, San Francisco, California, in "Cytological abnormalities in nipple aspirates of breast fluid from women with severe constipation", Lancet, 28 November 1981.

"Physicians Nicholas L. Petrakis and Eileen B. King of the University of California, writing in Lancet, have found that women who have 2 or fewer bowel movements per week have 4 times the risk of breast disease (benign or malignant) as women who have one or more bowel movements per day. They studied more than 5,000 woman by employing nipple aspiration to get small sample of breast fluid, which is normally secreted by these glands. Investigating the presence of large numbers of abnormal (dysplastic) cells. **They reviewed the history of past researchers who failed to identify Constipation as A Factor in the Development of Malignancies.** As a matter of curiosity, he chose to include questions concerning bowel function in the research protocols developed for his studies of breast-fluid chemistry and cytology.

> ***"We found that 5% of women having 1 bowel movement per day would have abnormal dysplastic cells, while 10% of women having fewer than 1 bowel movement a day would have this abnormality, and 20% of women having 2 or fewer bowel movements per week would show these dysplastic changes in cell character of the breast fluid. We found that 70% of the women we tested had exogenous chemicals in the breast fluid. We don't know why they are there, but we do know that the breast cells are in contact with the bloodstream, which will contain foreign substances absorbed into the Circulation System, from the Skin, Lungs, and the Gastrointestinal Tract."*** *- Dr. Nicholas L. Petrakis, MD*

Dr Petrakis also cited dietary considerations such as; the bowels of people who eat meat contain greater amounts of mutagenic substances than do the bowels of those who abstain from eating meat. And that the Intestinal Bacterial Flora of meat eaters include certain species that interfere with so-called "glucuronide linkages" necessary to complete the excretion of estrogen delivered to the gut in bile." - Dr Cory SerVaas, MD, in "Saturday Evening Post", April 1982.

*"**The surgery of malignant disease is not the surgery of organs, it is the anatomy of the lymphatic system.**" - Lord Moynihan, MD, FRCS, in "Surgery, Gynecology & Obstetrics", 1908.*

National Health and Examination Survey

"The purpose of the National Health and Examination Survey Epidemiologic Follow-up Study was **to investigate prospectively morbidity and mortality outcomes** among the 14,407 adults originally examined in 1971-1975. **The specific objective** of this intramural project was to **Investigate a number of Nutrition And Cancer.**

Results from NHEFS studies that have been published or in press include:

1. Moderate alcohol consumption (3 or more drinks per week) was positively associated with breast cancer. The association was stronger in younger, leaner, and premenopausal women. The potential role of alcohol consumption in the etiology of breast cancer has been prominent.
2. in several recent studies and is particularly important because it is a risk factor that can be modified.
3. Men and women in the lowest quartile of body stature were at reduced risk of cancer relative to those in the upper three quartiles. This association was present especially for cancers of the large bowel in men and women and breast in women.
4. In an investigation of a hypothesized association between **constipation and breast cancer**, **breast cancer risk was found to be slightly increased in women with decreased frequency of bowel movements** and firm stool consistency.
5. Our analysis of data from the first 5 years of follow-up found that among women with biopsy proven benign breast disease there was a direct relation between breast cancer risk and degree of Epithelial Atypia (lesion of the breast terminal duct lobular units)." - in "Annual Report", National Cancer Institute, 1 October 1989- 31 September 1990.

*"**The lesson regarding carcinoma of the breast which must be inferred from this anatomy is that when emboli of carcinoma cells filter through the defence zone of axillary lymph nodes and reach the subclavian trunk, their route of escape into the venous circulation is short and easy.** Metastases into the internal mammary nodes are almost as close to this danger point. **A description of the local extension and the regional lymph node metastasis of breast carcinoma must include a discussion of the method by which the disease extends along lymphatics.** Permeation rather than embolism is the usual method of dissemination. **The main route for lymphatic metastasis from breast carcinoma is through the axilla, the axillary nodes being the first to be involved in the regional lymphatic filter.** The left lateroaortic nodes rest on the vertebral origins of the psoas*

muscle. The right lateroaortic chain is augmented by the laterocaval, precaval, retrocaval, and interaorticovenous nodes. Retroaortic nodes are situated directly anterior to the bodies of the 3rd and 4th lumbar vertebrae. While some laterocaval, precaval, and lateroaortic nodes contribute efferents to the preaortic inferior and superior mesenteric plexus, the principal pathways to the cisterna chyli lie behind the aorta, where the convergence of these lymphatic channels form the right and left lumbar trunks. ***This complex, interrelated system of superior mesenteric, inferior mesenteric, and iliopelvic lymphatics provides the principal and collateral routes for lymphatic drainage of the colon and rectum."*** *- Dr Cushman Davis Haagensen, MD in "The Lymphatics in Cancer", 1975.*

"Vascular pathology occupies a leading position in the morbidity structure of the population of developed countries; in the last decade there has been a rapid increase in the incidence of diseases accompanied by disturbance of the drainage function of the veins. *Meanwhile, the important role of the lymphatic system in the compensation of circulatory disorders arising in the presence of venous stasis has been proved quite conclusively during these years, and a role of particular importance in these processes is played by the lymph node, as an instrument for the redistribution of fluid and cells between the blood vascular and lymphatic systems.* ***The different location of a lymph node draining the zone of venous stasis (located inside or outside the zone of venous hypertension) thus leads to qualitatively different types of reorganization of the structure and function of lymph nodes. This reorganization is aimed at compensating circulatory disorders arising when the drainage function of the veins is disturbed and it is accompanied by marked and irreversible changes in the lymph nodes."*** *- in "Comparative changes in microanatomical organization of lymph nodes draining and located in a zone of venous stasis", Bulletin of Experimental Biology and Medicine, April 1990.*

"There is indirect evidence that bowel function may be related to breast cancer risk. Petrakis and King found severe constipation to be associated with cytologic abnormalities in epithelial cells from breast fluid, which are related to epithelial dysplasia in breast tissue. Atypical proliferative breast disease is a significant risk factor for breast cancer in women; we, and others, have shown the risk to increase with increasing degree of epithelial atypia. Intestinal bacteria produce carcinogens and mutagens, presumably through their actions on dietary constituents and/or bile acids. Breast secretory (apocrine) epithelia selectively absorb and concentrate substances from the circulation originating from the gastrointestinal tract. Constipation, which results in greater contact time of stool in the intestine and hard stool consistency, may increase formation and absorption of fecal mutagens into the

enterohepatic circulation and delivery to breast tissue. The relative risk of breast cancer appeared to increase with decreased frequency of bowel movements." *- in "Bowel Function and Breast Cancer in US Women", Am. J. Public Health, January 1989.*

Stasis

"Stasis (from the Greek, to stand). A termination denoting a standing, or a position in a place." - in "A Dictionary of Terms Used in Medicine and the Collateral Sciences", 1865.

Copro-stasis

"Copro-stasis (corpo from the Greek, faeces). Undue retention of the faeces in the intestines." - in "A Dictionary of Terms Used in Medicine and the Collateral Sciences", 1865.

Apostasis

"Apo-slasis (from the Greek to stand). An aposteme, imposthume, or abscess. When a disease passes away by some outlet, Hippocrates calls it apostasis by excretion; when the morbific matter settles on any part, he calls it apostasis by settlement; and when one disease turns to another, apostasis by metastasis." - in "A Dictionary of Terms Used in Medicine and the Collateral Sciences", 1865.

"Removes the obstruction, lets the life-giving current have full play, and the man is restored to health." *- Dr A. T. Still, MD, DO in "Autobiography", 1897.*

Some articles in this chapter are from the Book "Emunctology Principles and Foundations of the Emunctory System".

"**Sir Arbuthnot Lane was the first to direct our attention to Chronic Intestinal Stasis. Now its importance has become universally recognised.** The book "Chronic Intestinal Stasis" 1923, deals with the condition as seen by the radiologist, and gives a general account of stasis and its results. **Chronic Intestinal Stasis is due to abnormal delay in the passage of the intestinal contents through some or all parts of the intestines, and to the absorption of bacterial toxins resulting from intestinal stagnation.** Stasis may commence insidiously, and neither the victim nor his friends may be aware of the mischief that is slowly but surely brewing. Sooner or later, however, the evil compels attention, either by the general ill-health it produces, or by some acute lesion of a tissue or an organ, arising suddenly, and without obvious provocation. So diverse and severe are the changes wrought by stasis that there is urgent need for a widespread understanding of the disease, which has only come to be appreciated since the genius of Sir Arbuthnot Lane disclosed its nature. **He has led us a long way on the road to a Correct Understanding of the Essential Unity of Disease, and has taught us to regard The Organism as a Whole, and not as an assemblage of organs in water-tight compartments. Text-Books are** - of necessity - **arranged under headings classified according to organs or regions. This system, necessary for purposes of instruction, has a fundamental fault. It fosters the fallacy that disease involves individual organs, whereas, in truth, though only one organ cries out for help, the whole system is out of gear.** This fallacy has imbued the medical profession for so many generations - indeed centuries - that it is most difficult to eradicate. I shall not have worked in vain if this volume helps my readers to take a broad and comprehensive view of disease." - Dr Alfred C. Jordan, CBE, MD (Camb.), MRCP (Lond.) in "Chronic Intestinal Stasis, A Radiological Study", 1923.

Stasis in the Causation of Disease

The Emunctologist should have a clear understanding of the Stasis as a factor in the causation of disease.

Stasis either:

1. Venous Stasis, stasis in the circulation of blood.
2. Lymph Stasis, stasis in the circulation of Lymph.
3. Bile Stasis, obstruction of the bile ducts results in focal bile stasis.
4. Intestinal Stasis, stasis of the contents of digestion present in the colon.
5. Portal Stasis.
6. Uterine Stasis.

All stasis is detrimental to all organs of the body.

Any matter, that is present in stasis, that is meant to circulate, rather than to stagnate, starts to decompose in situ. This will inevitably affect the surrounding cellular tissue.

Venous Stasis in Optic Neuritis

"Dr. E. Weigmann, in Klin. Mon. fur Aug., reports the following:

On 3 May 1911, a woman, aged 40, consulted him on account of occasional obstructions of sight within the last 2 weeks, which set in after chancing the position of the body or head e. g., after stooping in reading and writing.

Vision was nearly normal, the visual field showed a slight contraction for colours. Both optic discs were very red, their borders indistinct, veins enlarged, the tissue of the discs slightly opaque, the lamina cribosa and walls of the vessels on the discs veiled. The discs were swollen, but not projecting.

Near the left disc were 2 small retinal hemorrhages.

The treatment consisted in ironsajodin.

On 25 January 1912, the opthalmoscopic condition was about the same, but the discs were somewhat paler and the arteries narrower. There was a slight contraction of the left visual field in the inferior nasal quadrant. The only etiological element was, that the patient suffered the preceding winter for one quarter year from a severe whooping cough. He attributes the obscuration after changing the position of the head to transient disturbances of circulation.

The effection of the optic nerve may have been produced mechanically by intracranial transudations in consequence of venous stasis, brought about by the paroxysms of whooping cough, or by hemorrhages in the optic sheathes or by toxins of whooping cough bacilli, described by Bordet and Gengou." - in Journal of the Medical Society of New Jersey", Vol.9, 1913.

Stasis of Bile

> *"Relieve chronic constipation, especially when due to biliary stasis; check intestinal fermentation and putrefaction, and prevent and relieve intestinal auto-toxemia." - in "The Medical Standard", 1909.*

> *"Intermittent biliary stasis is admittedly the principal predisposing cause of cholelithiasis; and the stasis is to be thought of as effective, in many instances at least, through the excessive biliary inspissation for which it gives opportunity. In this way a normal gall bladder can become, merely through functional activity, a menace to the organism." - Dr Peyton Rous, MD, Dr Philip D. McMaster, MD in "Physiological Causes for the Varied Character of Stasis Bile", 1921.*

"Dr P. Mayer, in The Lancet, 1 June 1912, emphasized the point that the guiding principles in the treatment of Cholelithiasis (gallstones) are de rived from the well-established facts that **Stagnation of the Bile is the fundamental condition for the production of concretions (masses of mineral matter), and that in chronic inflammatory cholelithiasis infection plays the most significant role, infection in its turn being favoured by Stasis of the Bile.** Since the formation of stones is always a secondary phenomenon, it would be irrational to direct treatment exclusively against the stones them selves, because, even after the expulsion of some of the stones, **if the Stasis and inflammation continue, stones still remaining behind may grow larger**, and new stones may form, as a consequence the conviction becomes more and more firmly established that the object of treatment consists not in the expulsion of the stones, but in the prevention of the formation of new stones by combating stasis and inflammation, and in bringing stones already present to rest, thus inducing a latency of the disease, which is in effect almost a recovery, since stones often remain for years as harmless foreign bodies as soon as the flow of bile becomes normal and the inflammatory process ceases." - in "Journal of the Medical Society of New Jersey", Vol.9, 1913.

Bile Pigment

"Bilirubin, the colouring matter of the bile, is chemically identical with hematoidin. It is a product of the liver cells, being formed by them from hemoglobin.

Bile sometimes escapes into the circulation either as the result of Bile Stasis or in consequence of necrosis of liver cells, and diffuses into the organs and tissues, staining them a yellow to green colour.

The resulting condition is known clinically as icterus or jaundice (yellowish or greenish pigmentation of the skin and whites of the eyes due to high bilirubin levels).

Bile Stasis is caused throughout the liver by obstruction of the bile duct or the common duct, usually by gall-stone or tumour, or focally by obstruction of the smaller bile vessels by inflammatory exudation, by sclerosis, or by pressure from an infiltrating tumour.

Bile stasis results in dilatation of the bile capillaries, most marked around the hepatic vein in each lobule. The bile often breaks through the wall of liver cells and escapes into the lymph-space between the cells and the walls of the sinusoids.

Here the inspissated masses are incorporated and gradually digested by endothelial leukocytes. The fluid bile apparently passes directly into the circulation through the endothelium lining the sinusoids and is carried all over the body. It stains nearly all tissues yellow. If the icterus is persistent the colour may turn to green.

When the liver is severely injured by toxic and infectious processes (phosphorus poisoning, acute yellow atrophy, sepsis) bile escapes into the circulation.

This is due in some instances at least to necrosis and dissolution of the liver cells allowing the bile to escape from the bile capillaries.

Jaundice

Icterus (jaundice) is always of hepatogenous origin. This is shown by the constant presence in the blood of bile acids, which can arise only in the liver.

Enough hematoidin (chemically identical with bilirubin) is never set free by diffusion from hemorrhage, or by breaking down of the corpuscles within the circulation to cause icterus.

Bile pigment usually diffuses and simply stains most cells and intercellular substances, but the central nervous system is never coloured in the adult and rarely in children.

Necrotic tissue, on the other hand, is readily stained as shown by the classical examples, the sloughs in the intestine in typhoid fever and the caseous (necrosis with conversion of damaged tissue into a soft cheesy substance) tubercles involving the bile ducts in the liver.

Sometimes the bile pigment is deposited in granules which are usually yellowish but may be greenish if old. They occur most commonly in the liver cells, in the endothelial cells lining sinusoids and capillaries, in renal epithelium, etc.

The pigment itself does not seem to be injurious to cells, but the accompanying invisible bile acids and other substances may do damage.

Bile pigment is very rarely found in crystalline form in the adult as a result of postmortem changes; in the macerated fetus its occurrence is more common.

Bile Pigment from Obstruction of Bile Ducts

In general Bile Stasis, it is located around the hepatic vein in the centre of the lobule, chiefly in the dilated bile capillaries near the hepatic veins, but also in endothelial leukocytes between the liver columns and the walls of the sinusoids.

Less often it is found as granules and small elongated masses in the cytoplasm of liver cells. When the Bile Stasis is focal, as in the different forms of cirrhosis, the inspissated bile may be in any part of the lobule or even in the bile ducts.

Mechanical Lesions: Bile Stasis

When the outflow of the bile from the liver or any part of it is prevented the bile ducts and capillaries back of the obstruction become distended, often to a marked degree. **If the obstruction affects the common bile duct a uniformly distributed general bile stasis occurs. If small bile ducts here and there are blocked then a focal bile stasis results.**

General Bile Stasis is usually caused by a calculus in the common bile duct or by a cancer involving it.

Focal bile stasis is common in different forms of sclerosis of the liver, where it is due to constriction of bile ducts by contracted connective tissue; and in infectious processes extending along the bile ducts, where the inflammatory exudate present more or less prevents the escape of the bile.

When general bile stasis exists, unless the liver is hardened “in toto”, the bile quickly escapes from the dilated bile ducts and also from the bile capillaries near the portal vessels as soon as the organ is sectioned, and these vessels contract.

As a consequence, on microscopic examination after fixation the bile is found, as a rule, only in the bile capillaries around the hepatic veins. In focal bile stasis, however, the bile ducts are occasionally found distended with bile.

On microscopic examination of the liver, in which general bile stasis has existed, the bile is found in masses distending the bile capillaries around the hepatic veins.

It also occurs as a fine meshwork where secreted within the cytoplasm of the liver cells, being unable to flow out into the bile capillaries.

It collects in the form of granules and small irregular, usually elongated masses, and mechanically or chemically often leads to necrosis of the affected cells.

Occasional mitotic figures show that regeneration of the liver cells may take place. Microscopic evidence certainly favours the view that it is chiefly the liver cells around the hepatic veins in the inner half or less of the lobule, which are concerned with the secretion of bile.

The cells around the portal vessels never show the same changes.

If the obstruction is complete and persistent, the inspissated bile frequently breaks through the wall of the liver cells surrounding it and escapes into the lymph-space lying between the rows of liver cells and the walls of the sinusoids.

Here the masses of bile are taken up by endothelial leukocytes, which migrate into the space, and are gradually dissolved.

Frequently in small areas the endothelial leukocytes outnumber the liver cells.

The presence of occasional pigmented endothelial leukocytes in the lymph-channels around the portal vessels indicate that a little, at least, of the dissolved bile enters the circulation in that way.

On the other hand, the endothelial cells lining the sinusoids are usually pigmented only in the neighbourhood of the hepatic vein, where the inspissated bile escapes from the bile capillaries and is dissolved by the action of endothelial leukocytes. This relation of escaping bile and pigmented endothelial cells suggests that a part at least, perhaps most, of the bile enters the circulation directly by osmosis through the endothelial cells lining the sinusoids.

This view is favoured by experimental work on dogs which shows that the bile does not enter the circulation through the thoracic duct.

Some of the masses of bile in the bile capillaries and in the cytoplasm of the liver cells may be set free by necrosis of the cells, but apparently no extensive necrosis of liver cells is caused simply by the bile being dammed back, and no sclerosis around the hepatic veins results.

On the other hand, no lesion of any sort is formed in the region of the portal vessels from simple uncomplicated bile stasis.

If infection of the bile ducts occurs, however, a very different appearance is caused, as will be described later. In focal bile stasis the cell changes due to the distention of the bile capillaries are similar to those already described, but may occur in any part of a lobule or throughout it in the areas affected.

As a result of general stasis of bile around the hepatic veins, the centers of the lobules appear yellowish green to dark green on section, in more or less well marked contrast to the lighter stained peripheries.

In focal bile stasis the affected areas stand out distinctly of a dark green colour.

Generalized bile stasis due to obstruction of the common duct

It is not at all uncommon to find all these different processes (hyaline degeneration, leukocytic infiltration, regeneration, proliferation of connective tissue, and focal bile stasis) present in one and the same liver section.

Tumours in the Causation of Bile Stasis

Carcinoma of the papilla of the common bile duct occurs occasionally and is clinically of great importance, although it may not exceed one centimetre in diameter, because it usually leads to complete bile stasis.

Infectious Cirrhosis

When bile stasis exists from obstruction of the common bile duct, infection along the duct is not infrequent.

Of greater importance, however, are cases of primary infection along the bile ducts. This condition apparently occurs most frequently in children.

It is attended with fever, jaundice, and often rapid enlargement of the liver.

In one acute case the etiologic agent was a Gram-negative bacillus, probably bacillus coli. The lesion consists of an inflammatory exudation in the bile ducts and in the periportal connective tissue.

Where the lesion is acute the exudation consists of polymorphonuclear leukocytes, serum, and fibrin. Where the process is less active the exudation consists chiefly of endothelial leukocytes, many of which are phagocytic and contain fragments of cells.

Mitosis in endothelial leukocytes is found occasionally.

Lymphocytes are present in relatively small numbers.

Proliferative reaction on the part of the fibroblasts is well marked and evidently **follows injury to the connective-tissue cells by the Toxins From the Bacteria.**

The bile ducts are much distended by the inflammatory exudation into them, and in places the lining epithelium has been entirely destroyed.

The connective tissue surrounding the bile ducts and portal vessels is greatly distended by the exudation which fills all the lymph-vessels and spaces so that the portal tissues show up as broad bands.

In many places the lesion is encroaching on the adjoining liver cells, which show first a marked granular degeneration of the cytoplasm and then necrosis.

Invasion and dissolution by leukocytes follow.

In this way the lesion spreads more or less irregularly towards the hepatic veins. In those parts where the lesion is older and the exudation is less active the bile-ducts are dilated and appear much increased in number, as though a diffuse bile-duct adenoma were present in the liver.

This appearance is probably due to contraction following marked dilatation and stretching of the ducts when the lesion was more acute. In many places the inflammatory exudation in the smaller bile ducts leads to occlusion of them and to obstruction to the out flow of bile, which appears in the ducts above the point of obstruction in the form of yellowish green inspissated masses.

The obstruction is focal only, however, not general, and this accounts for the moderate degree of jaundice produced. This type of infection is likely to recur so that much destruction of liver cells and production of connective tissue may occur.

In one case a typical coarsely lobulated liver was produced in a boy of 14 in about 6 months by three attacks. The situation of the lesion chiefly around the portal vessels seems to be fairly characteristic. In 2 infants born jaundiced the common bile ducts were found obliterated, and the bile ducts throughout the liver were surrounded by a thick zone of fibrous tissue. This condition suggests strongly an intra-uterine infection extending along the bile ducts.

This type of lesion resulting in sclerosis (infectious cirrhosis) corresponds to acute and **chronic pyelonephritis in the kidney, often due to the colon bacillus.**

Jaundice

Jaundice is the name applied to the yellow hue acquired by the skin, sclera, and internal organs and fluids when they have been stained by bile pigments due to the presence of bile in the blood.

When the bile is large in amount and persists for a long time the colour may become brown or green.

The liver usually appears the most deeply stained, generally a dark green, because in addition to the diffuse bile staining, the lobules often contain masses of inspissated bile in their centres around the hepatic veins.

The kidney comes next in intensity of colour, because in addition to the general staining its cells contain granules of bile pigment which is being excreted through them. **Jaundice usually results from general or focal bile stasis in the liver and the escape of bile, as already explained, into the circulation.**

General Bile Stasis is due to the occlusion of the common or hepatic bile duct by calculus, cancer, gumma, cicatricial contraction and other causes.

Focal Bile Stasis results from any cause which occludes branches of the bile duct, such as cirrhosis, tumour metastases, abscesses, infection of the bile ducts.

In all these instances the stasis of the bile and the escape of the inspissated masses of it from the distended bile capillaries is readily demonstrated microscopically. **Jaundice may follow central necrosis of liver cells**, especially the severer types of the lesion terminating in acute yellow atrophy.

Two reasons may be assigned for the jaundice; in the milder lesions, owing to necrosis and dissolution of the liver cells, the bile capillaries are left open at their outer ends toward the hepatic vein so that the bile can easily escape; in the severer lesions single liver cells and small groups of them are left without connection with the bile ducts; the bile secreted by them necessarily escapes. Jaundice may occur in midzonal necrosis apparently from the same cause, a break in the continuity of the bile capillary system. In this group of lesions no inspissated bile is found.

The cause of the jaundice occurring in septicemias with the streptococcus pyogenes, pneumococcus, bacillus aerogenes capsulatus, malaria organisms, etc., is not evident in sections morphologically.

Jaundice in lobar pneumonia may sometimes be the result of a septicemia; in other instances a small amount of inspissated bile may be found in the bile capillaries, but not out side of them.

Although it is strongly denied by many investigators, the possibility still exists that in some instances of jaundice the bile pigment may originate from the blood pigment outside the liver and independently of any hepatic action.” - Dr Frank Mallory, MD in “The Principles of Pathologic Histology”, 1914.

Stasis of Bile: Favours Bacterial Colonization

"A luxuriant and abnormal intestinal bacterial flora may develop in association with certain diseases of the stomach and small intestine.

Faecal-type microorganisms may colonize the upper small intestine in patients with gastrectomy, jejunal diverticulosis, blind loops, strictures, resections, and fistulae.

The results of these studies at multiple levels of the small intestine show that although many patients had an extensive growth of microorganisms, such as coliforms and lactobacilli, throughout the small bowel irrespective of the causative lesion, the presence of anaerobic microorganisms and free bile acids was found to be related to local anatomical defects.

For example, bacteroides and bile salt deconjugation generally occurred only in relation to areas of stasis.

It appears, therefore, that the micro-environment necessary for growth of this fastidious anaerobe, that is, low oxidation-reduction potential, is available in areas of Intestinal Stasis.

This requirement appears to be fulfilled in the colon or terminal ileum of normal subjects and in the stagnant area of small bowel in patients with diverticula, strictures, or blind loops." - Sherwood L. Gorbach in "Bacteria, Bile, and the Small Bowel", Gut, 1969.

The Energy Source of the Psychoneuroses

"Psychoanalysts contended that there was no such thing as an actual Neurosis. This illness also, they said, was "psychically determined."

Unconscious psychic contents could also be shown to exist in so-called "free-floating anxiety." Stekel was the chief exponent of this view.

He argued that all forms of anxiety and nervous disturbances were psychically determined and not somatically determined, as was contended in the case of the actual neuroses.

Like many others, Stekel failed to see the fundamental difference between the psychosomatic excitation, and the psychic content of a symptom.

Freud did not clear up the contradiction, but he stuck to his initial differentiation.

I, on the other hand, saw any number of somatic symptoms in the psychoanalytic clinic. However, **it could not be denied that the symptoms of the Actual Neurosis also had a Psychic Superstructure.**

Cases of pure actual neurosis were rare.

The differentiation was not as clear-cut as Freud had assumed.

Such specific questions of scientific research may well appear unimportant to the layman. **It will be shown that very decisive problems of human health were concealed in them.**

In short, **there was no doubt that the Psychoneuroses had an actual (Stasis) Neurotic core, and that the Stasis Neuroses had a Psychoneurotic superstructure.**

Was there still any point in differentiating the two?

Was it not merely a quantitative question?" - Dr Wilhelm Reich, MD, in "Supplementation of Freud's theory of the Anxiety Neurosis", The Discovery of the Orgone, 1948.

Stasis Neuroses

Originally the same as Freud's "actual neuroses", the concept now includes all somatic disturbances which are the immediate result of the Stasis of Sexual Energy.

Promoting Cellular Drainage

> ***Dr James W. Wiltsie, MD, Consultant in Physical Therapy at the Binghamton City Hospital, Binghamton, New York, is insistence that the benefits of cleansing the Emunctories have a remarkable effect in "promoting tubular and cellular drainage, the healing of diseased tissues, the restoration of normal colon function, the improvement of both capillary and lymphatic circulation, and of liver function.*** *The principle back of free drainage is that infection tends to disappear when drainage is adequate, and in the absence of a feeder." - in "Chronic Intestinal Toxemia and Its Treatment with Special Reference to Colonic Therapy", 1938.*

All articles in this chapter are from the Book "Emunctology Principles and Foundations of the Emunctory System".

Improper Drainage

"Constitutional toxemia alone paves the way for secondary infections.

If lowered vitality, enervation, permits germs to gain a foothold and complicate toxemia, it is but logical to assume that the first step in recovery is to get rid of the toxemia. This accomplished, the soil is no longer fertile for germ propagation and the secondary infection ceases to exist for want of its most necessary food: i.e., toxin-saturated tissue of low vitality and resistance.

The human body cannot be made dependably or permanently well unless the surplus toxins are removed from the blood and tissues.

At least 75% of all symptoms, diseases, and discomforts disappear with the removal of toxins. No one can expect full health unless he lives in a manner to keep his toxemia below the saturation point and his vital energy high.

All people are more or less toxemic, but only those who are ill are pathologically toxic.

The changes wrought in tissue by repeated and violent physiological disturbances often result in permanent alteration of organic structure, and real disease is always represented by pathological alteration.

Many persons live under the mistaken impression that bowel evacuation represents the whole system of human drainage.

This is far from the truth. Only 14% of the unusable waste in the form of toxic poisons finds its way out of the body through the bowel.

It is true that many lateral and brand drains empty into this main sewer.

Of far more importance to the health of the human race, are the large and small arteries and veins and the lymph channels that maintain the circulation.

Of still greater importance to life and function are the millions of microscopical channel, and intercellular spaces that act as middlemen or distributors between the source of supply which ,s the blood, and the ultimate consumer which is the cell. Everyone knows the harmful results of incomplete intestinal drainage, itself an effect rather than a cause.

And imperfect drainage throughout the entire organism is but another form of constipation, going on continuously as a result of wrong eating even though the bowels move freely every day. **In most persons drainage is obstructed very early in life, due entirely to an overcrowded nutrition. The functional capacity of the body is not equal to the burden imposed upon it.**

When nature sees fit to rebel against the practice of over-eating we develop what is known as disease or discomfort.

These discomforts do not, except in occasional instances, come on at once.

It may take years before we find out that we have been injuring ourselves.

1. What precedes and accompanies local swelling, congestion, or inflammation?

Imperfect drainage. This is true regardless of whether the immediate or exciting cause be an injury or an infection.

2. What prevents blood poisoning following wounds or abrasions?

Proper drainage.

3. What relieves the pain and removes the infection from an abscessed tooth?

Drainage.

4. What do inflamed or infected tonsils need?

Drainage.

5. What does a boil or an abscessed appendix need?

Drainage.

6. What about a congested liver, an obstructed gall duct, an infected and debris- engorged gall bladder?

They need drainage.

7. What about lumps in the breast or swollen mammary or lymphatic glands?
Drainage needed.

8. How about certain venereal infections—for rapid cure?
The need is Drainage.
9. What does the engorged lung in pneumonia need to relieve it?
Drainage.

10. The mucous surfaces that are congested in acute or chronic catarrh?
Drainage.

11. The sinuses or a mastoid abscess?
Drainage.

12. A post partum infection?
Drainage. We are mentioning common conditions that all of us know and many of us have experienced.

13. Why do these diseases occur in the first place?
Lack of drainage. If drainage had been perfect there would have been no local manifestation.

14. What was undrained?
The veins, the capillaries, the lymph channels, the cells themselves.

15. What caused them to clog?
Too much food, resulting in imperfect combustion and in clinkers instead of an easily removable or soluble ash. Is is the cause of arteriosclerosis in which the caliber of the blood vessels is gradually lessened by the accumulation of waste.

16. What is the condition of the body when arteriosclerosis is already quite easy to diagnose?
Imperfect nutrition plus imperfect drainage.

17. What happens to the rest of the body?
The same identical impairment. The person is dying on his feet, all over, and all the time. The condition is progressive.

18. What then is the crying need of the body?
Drainage, removal of obstruction; opening up of the channels that supply nutrition; and of equal importance, clearing of lymph channels and venous circulation that carry away the debris.

Why seek forever and a day for causes outside the human body, when there is so much within that needs correction or drainage?

Cancer

Take for example the simpler form that usually starts as a benign lump in the breast. Often a history of a blow or bruise or injury of some kind can be elicited.

What happens?

The glandular structure is fragile and held together by loose connective tissue.

Bruising or crushing of the cells even in a small area causes local swelling and enough inflammation to obliterate the lymph channels.

The walls of these channels virtually adhere or grow fast to each other so that the lymph can no longer flow through them. **This gland structure suffers from lack of nutrition, lack of active and passive circulation. In time this area breaks down and becomes tender or painful. Drainage of the dead or dying cells is obstructed. Nature does not permit Dead Material to remain in any part of the body without making an effort to remove it.**

Dead cells and the substances into which they break down are toxic in character and they gain entrance to the blood stream by breaking through whatever boundaries nature has previously built, around them as protection.

This toxic material comes in contact with neighbouring lymph glands through communicating lymph channels.

Secondary processes or infections are thus set up, and the activity continues until sufficient tissue has broken down to cause a fatal ending.

What can be done about this condition in either the early or late stages?

Drainage and circulation must be established.

Surgery skilfully removes such local areas but it does not remove or correct the primary cause, which is obstruction of drainage throughout the body. **We cannot conceive that a body- developing lumps in the breast can have a free and unobstructed general circulation.**

In the affected area the injury prepares the soil.

Toxic, undrained waste supplies the irritation, and the stages of degeneration follow in natural sequence.

In the last stages of cancer the toxic material becomes so powerful that it virtually destroys the life of the blood. A condition allied to septicemia or blood poisoning supervenes, and this is invariably fatal.

In the early stages of lump in the breast the great majority of cases recover completely if living and eating habits are corrected.

What has diet to do with this?

Much. The highways and byways in the body become clogged because of too much food.

To be specific, too much carbohydrate (in the form of starches and sugars) and too much protein; too little of the fruits, salads, and vegetables which contain the alkaline bases. These are natures most effective alteratives.

Why are fruits and vegetables beneficial?

Because they are converted into chemical reagents, solvents, and neutralizers, fruits and vegetables are potent factors in liquefying excretions in the tissues, thus promoting drainage of protein and carbohydrate waste from lymphoid and cellular tissues and the intercellular spaces It is a matter of common teaching and belief that drinking large quantities of water accomplishes the same purpose.

This is an erroneous impression.

Water may to a certain extent dilute the toxic waste.

However, at the same time it dilutes the normal secretions of the body while placing additional labour on the organism in carrying it off, mainly through the skin and kidneys.

If the circulation is obstructed and drainage impaired, too much water remains in the tissues, resulting in hydremia or water-logging.

If drainage is unimpaired, the fluids of the body can circulate without being diluted with water.

We refer of course to excessive water drinking as a therapeutic measure. For actual thirst there is no good substitute for water." - Dr George S. Weger, MD in "Genesis and Control of Disease", 1931.

The Concept of Drainage

David McMillin, MA in "Principles Principles & Techniques of Nerve Regeneration: Alzheimer's Disease & the Dementias", 1997.

"Along with Neuropathic Coordination, Drainage is an essential component in the Regenerative Regimen for Rebuilding the Brain.

The emphasis on drainages is based on 2 important ideas:

1. In cases of progressive nerve deterioration the body is likely to be toxic;
2. Presumably, regenerative modalities will put the body into a reconstruction mode which is likely to increase the toxicity of the body.

The Body Has Natural Systems of Elimination for Cleansing Itself.

Regulation of these systems can assist the body in the cleansing process.

This assistance may be needed because the pathological condition of the primary regulatory system of the body (the central nervous system) may be compromised due to the illness. Providing support to the body's innate healing processes is fundamental to both Osteopathic, and Neuropathic Method.

To understand the natural process of drainages:

> ***"The artery carries nutritional substances and oxygen to the tissues. Its functional impairment results in deficient oxidation. Contrariwise, any circulatory perversion affects the respiratory function. Upon the lymphatic circulation falls the duty of direct cell-feeding and drainage. Veins are charged with general drainage. They are more easily compressible than arteries on account of their thinner and more flaccid walls. Interference with their physiological activities results in passive hyperemia and a storing up in the tissues of catabolic products."*** *- Downing in "Principles and Practice of Osteopathy", 1923.*

Thus, venous and lymph circulation; are the primary pathways of waste removal and tissue cleansing in the body.

Setting up Drainages

> ***"Venous circulation is encouraged by muscular contraction. Thus congestion in a certain area may be relieved by passive movements of the muscles and by deep Massage. The beneficial influence exerted on conditions about the head by thorough relaxation of the musculature about the neck in osteopathic practice, may be explained in part by its effect upon venous drainage of the head."*** *- in "Osteopathic Fundamentals", 1927.*

> ***"The lymph stream must always be drained first through the terminal areas. Attempts to clear the lymph stream before clearing the edema in the clavicular regions is to over-tax the general lymph stream and cause profound reactions. Any permanent results in treating the lymphatics must be accomplished through the nerve centers that control the vasomotor nerves of the blood vessels in the same region as the lymph blockage. Never work over an enlarged or indurated lymph node - free the efferents and the lymph will drain. General exercises will stimulate lymph flow, but if there is marked lymph blockage it is better to relieve the lymph tension before exercises are given. This will save marked reactions."*** *- Dr Millard, DO, in "Applied Anatomy of the Lymphatics", 1922.*

Manual Therapy Techniques to Improve Drainages

Osteopathic Drainage is particularly relevant; because it focuses on the issues of drainage, in cases brain degeneration.

"The Osteopath's work is directed toward 2 primary objects:
1. The equalizing of the general circulation of the blood.
2. The continued control of the blood supply to the brain and the correlative drainage. To accomplish these ends the circulatory centers are first thoroughly treated; the muscles, ligaments and tissues which surround them are relaxed by pressure and by movements which will stretch the tissues. The next treatment is a stimulation put upon the deeper structures so as to secure the action of the heart and arteries. The 3rd to 5th dorsal is the region for this work. Next, raise the clavicles; notice carefully the 1st rib and put steady pressure on the inferior cervical ganglion. The solar plexus, controlling the lumen of the mesenteric vessels, aid in controlling blood pressure. The hand laid firmly over the solar plexus will reduce general arterial pressure and by equalizing the flow will relieve congestion in any part of the body. The tissues of the neck demand a complete relaxation. This is for drainage. Then by holding the vertebral arteries for 3 to 5 minutes, the head thrown backward, the cerebral congestion is overcome. In cases of cerebral congestion the feet should be placed in warm water and ice bags applied at basis crani." *- Dr Riggs, DO, in "Brain Troubles", A Manual of Osteopathic Manipulations and Treatment, 1901.*

Drainage of the Head and Neck

"Deep drainage treatment may be done by direct relaxation behind and under the angles of the jaws with the head well extended. By forcing the head and jaw backward thus compressing these glands and again extending the repeating the direct deep drainage treatment, the glands and vessels may be "pumped" and made to increase their function of drainage. Except in acute inflammatory conditions, direct stretching of the soft palate and dilatation of the posterior nares by means of the fingers are effective; also exercises for draining the cervical lymph glands and exercising the muscles of the neck are effective.

According to Treves, "Accessory glands, belonging to the thyroid body, are frequently found in the vicinity of the hyoid bone.

They are also found in the basal part of the tongue, near the foramen caecum.

In many cases of acute disease the swelling of these glands like the postpharyngeal glands cause much soreness and discomfort.

In tonsillitis, pharyngitis, etc., there is usually some affection of these glands, but, as stated above direct treatment is not indicated during the acute state.

Deep relaxation under the angles of the jaws externally will facilitate drainage.

After the acute stage has passed, direct treatment may be done as follows:

The 2 cornui of the hyoid are grasped between the thumb and second fingers of the left hand, palm upward, while the 1st and 2nd fingers of the right hand are passed, palm downward, over the base of the tongue thus holding the hyoid firmly between these 4 fingers. The hyoid may now be lifted upward and thus by virtue of its attachment to the thyroid cartilage, the entire larynx may be lifted.

The hyoid is held in this position for a few seconds, then pulled firmly forward and then downward and by these movements they pharyngeal constrictors may be relaxed and lymphatic and venous drainage accomplished." - Deason, in "Millard", 1922.

Draining Cervical Lymphatics

"To drain the cervical lymphatics stand on the right side of the patient, in dorsal position, place the left hand on the forehead, and with the right hand reach over the sterne cleide mastoid muscle, draw the muscles up closely around the chin, with pressure on parotid and sub-mental gland, turn the head away gently with the left hand and continue this movement downward, one vertebrae at a time, to the 7th cervical.

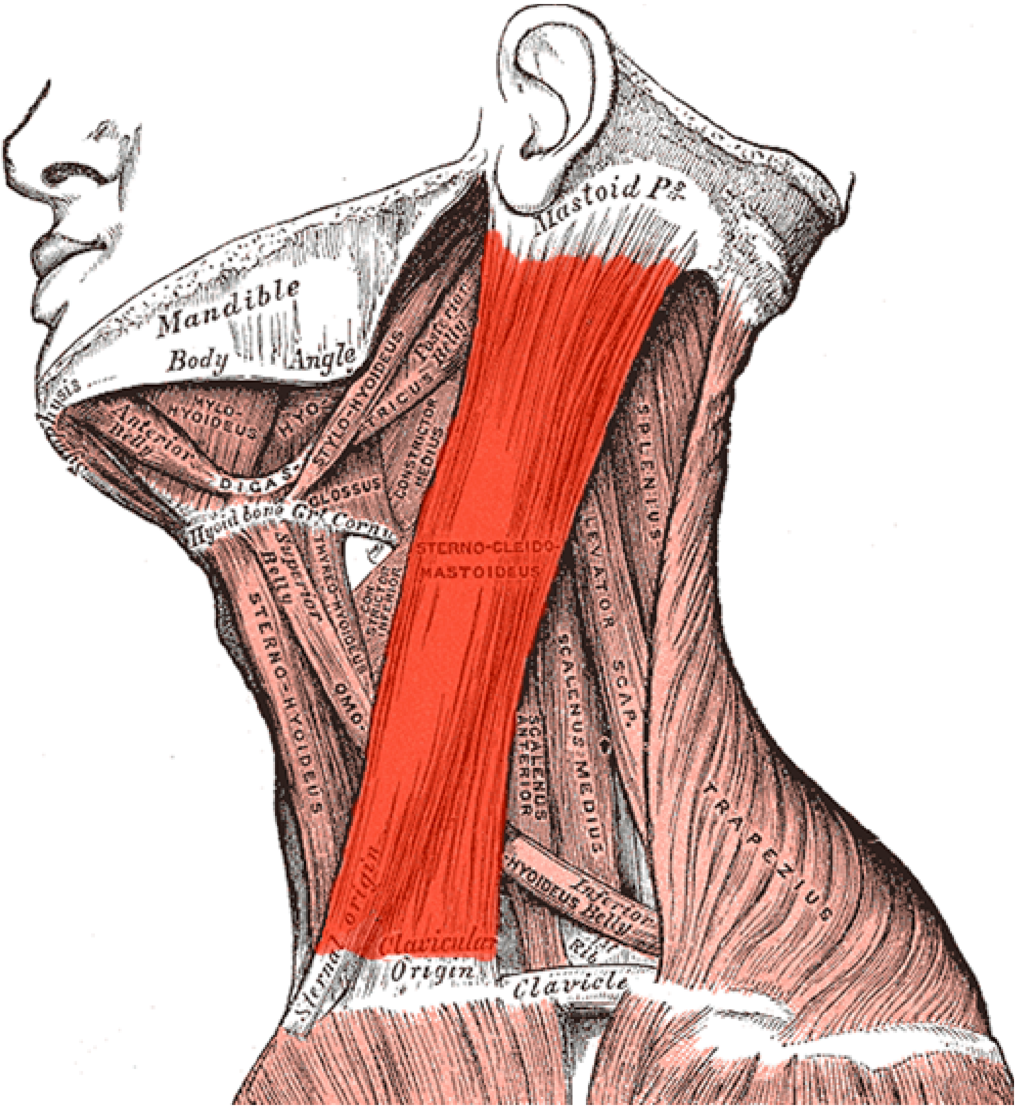
Gently inhibit with right index and middle finger the 1st and 2nd dorsal vertebra together, drawing muscles away from spine, turn head away from operator and upward.

Place the hand down over the scapula, draw the muscle up and place fingers against the superior border, laying the right arm against the chest of the patient and turn the head slowly and gently in the opposite direction from the operator. Stand at head and cross the hands under the patient's head.

Flex the head toward the chest, let down slowly, have the patient turn head to right and flex forward towards the patient's right elbow.

Let the head slowly backward and turn to the left and flex toward the left.

This movement stretches all the posterior neck muscles, ligamentum nuchae, trapezius muscle, flexes all anterior muscles and completes drainage of cervical lymphatics." - Haverin in "Original Osteopathic Moves Taught by Doctor Andrew Taylor Still to Doctor".


Mastoid Pt.
Mandible
Body
Angle
Symphysis
Anterior belly
MYLO-HYOIDEUS
HYO-
STYLO-HYOIDEUS
Posterior Belly
TRICUS
CONSTRICTOR MEDIUS
DIGAS-
GLOSSUS
Hyoid bone Gr. Cornu
Superior Belly
THYREO-HYOIDEUS
CONSTRICTOR INFERIOR
STERNO-HYOIDEUS
OMO-
STERNO-CLEIDO-MASTOIDEUS
SPLENIUS
LEVATOR SCAP.
SCALENUS MEDIUS
SCALENUS ANTERIOR
TRAPEZIUS
HYOIDEUS Inferior Belly
Rib
Sternal origin
Clavicular Origin
Clavicle

“Sternocleidomastoid muscle” - in “Gray's Anatomy”, 1918.

Lymphatic and Venous Drainage

A) Active: Patient lies supine on table.

He exhales completely, closes his mouth and grasps and compresses his nose with his fingers.

The doctor then asks him to contract his diaphragm and pull his abdomen inward as in attempting forced inspiration. This is repeated 5 or 6 times.

With shoes removed and lower extremities at right angles to trunk, the patient is asked to flex toes, circumduct ankles, and repeat the forgoing diaphragmatic exercise to reduce edema of ankles.

B) Passive: (Lymphatic or Thoracic Pump).

Patient lies supine.

Doctor stands at head of table and places both hands flat on patient's chest with thenar eminence of each hand just inferior to the medial end of the clavicle and over the anterior end of the first rib.

Doctor stands with upper and lower extremities rigid and trunk inclined forward at an angle of about 60 - 70 degrees with the floor.

He springs slightly up and down on toes, exerting quick, short thrusts on patient's chest at a rate of 20 - 60 a minute.

Cautions

A. This treatment should not be continued for more than 3 to 5 minutes.

B. It should be used guardedly in patients past 55 years of age on account of danger of separation or fracture of costochondral articulations.

C. It should not be used on patients with emphysema.

D. It should be used with great caution on cardiac patients with inadequate compensation." - College of Osteopathic Physicians and Surgeons, 1941.

Thoracic Lymph Drainage

"Going back to the lymph drainage of the lymph drainage of the muscles (of the thorax), **we may reach and influence the flow of lymph through a better vasomotor control of the blood vessels that supply the tissues and nodes.**

We may also reach the lymph drainage through correction of lesions that remove muscle tension over and around the lymph vessels and nodes.

This will call for adjustment of the cervical region to insure normal tone in the brachial plexus.

Correction of upper thoracic and rib lesions will stimulate vasomotor and trophic centres. Costal correction will regulate the upper thorax so that the lymph drainage into the subclavian veins will not be checked. The scaleni may be overtensed through cervical lesions.

To Stimulate Lymph Flow

Noteworthy Methods Are:

1. Deep Breathing. With each inspiration the flow of blood through the innominate veins causes a suction at the openings of the thoracic and right lymphatic ducts. This may be augmented by intra-abdominal pressure if the abdomen be forcibly drawn in.

2. Manipulation of the extremities by flexion of the joints and compression of muscles. This may be either active or passive.

3. Raising intra-abdominal blood-pressure by direct work over the abdomen and by compressing the ribs.

4. Restoring normal tone to the diaphragm if it is prolapsed or relaxed. Dr Still suggests that such prolapse may cause embarrassment to the thoracic duct. Hazzard elaborates this suggestion in "An Osteopathic Study of the Diaphragm", which is well worth pondering.

5. Drinking hot water, or preferably hot salt solution, or injecting the same per rectum and retaining it.

To Increase the Volume of Lymph

"The volume of lymph may be increased in various ways, among which:

1. Active and Passive Muscular Movements.

> ***"Muscular Activity Causes Increased Lymph Production, as well as More Rapid Escape of the Lymph. The tendons and fasciae of the skeletal muscles, which possess numerous small stomata, absorb lymph from the muscular tissue."*** *- Landois*

2. Increase of Blood-Pressure, by any of the manipulative means noted above.
Please see Chapter 23: Dr Hazzard, DO in "Osteopathic Manipulation of the Blood-Mass", JAOA, November 1904.

3. Quantities of hot water or salt solution per rectum. The reason for advising the use of hot water rather than cold lies in the fact that heat dilates the blood vessels, and absorption takes place more rapidly, while cold water causes contraction of the vessels.

Dr Byron Robinson held that: **the Lymphatic Vessels, through their Vasomotor Innervation, possess 4 Functions (PASS):**

1. **Peristalsis**
2. **Absorption**
3. **Secretion**
4. **Sensation**

And he ascribed **the cause of most diseases in which the lymph, and its flow are concerned To Either:**

1. Excessive Activity
2. Deficient Activity
3. Unbalanced Activity

In these functions (this embraces much of pathology).

Dr Byron Robinson strongly urged the importance in Constipation and other chronic conditions which the Osteopath is frequently called to treat, of giving regularly large quantities of water — better hot — and salt.

Seemingly afraid that his patients would scorn or neglect to take plain salt, he gave them NaCl tablets, flavored to disguise the taste, directing that they be placed on the tongue and swallowed with the water.

Salt is especially beneficial in that it stimulates the epithelium of the salivary, pancreatic and hepatic glands, the entire digestive tract, the urinary organs, etc.

(The one condition in which it is **contra-indicated is parenchymatous nephritis**, as it is irritating to the inflamed kidney cells)

Both: Blood Plasma, and Lymph Plasma; contain more than 0.5% of salt.

All of the glandular secretions contain salt.

Salt is an important digestant, especially of vegetables.

It is certainly a rational procedure to promote cellular activity by making use of this universal stimulant in the manner indicated above.

Why should we seek to increase the volume and flow of lymph?

Because **only by having an ample fluid medium can the maximum energy of the cells be attained.**

It has been proved by Metchnikoff, Bizzozero and others of Virchow's school that the normal individual cell is endowed with and exercises a power of self-defense and self-preservation against invasion.

Only with a sufficient volume of lymph is normality of the cells assured — through irrigation of the lymph spaces, maintenance of the nutrition of the cells, and free drainage of the excretions.

And **only through the continuance of maximum cellular activity can perfect health be maintained."** - in "Applied Anatomy of the Lymphatics", 1922.

Treatment for Drainage and Circulation of the Thorax

> ***"In cases of Pneumonia and allied conditions, there is one master treatment which accomplishes amazing results. This, I term the "make and break" movement. With one hand one the heads of the ribs posteriorly and the other on the ribs anteriorly, spring the ribs rhythmically in a line with their angle, alternating the pressure from hand to hand. To promote vaso-dilatation, sit down beside the patient with the hands at the 2nd and 3rd dorsal vertebrae. Exert pressure enough to relax and inhibit for 10 to 15 minutes, repeating as the case necessitates. Then, standing at the head of the bed, grasp the neck as low down as possible so as to get straight traction on the 2nd dorsal. Make and break for dilatation of the lung arterioles. Direct pressure movements downward and backward over the sternum and upper seven ribs on each side, the patient lying on his back, are very efficacious in stimulating the lymphatics."*** *- Snyder, in "Applied Anatomy of the Lymphatics", 1922.*

List of Toxins and Waste Products Lymph Drained by the Lymph

The circulation of lymph provides ample opportunity for toxins to come in contact with the surfaces of the body's powerful cleansing cells (such as macrophages and lymphocytes).

The lymph contains waste products for example metabolic breakdown products, inflammatory products or fat from the abdominal cavity and cellular debris together with bacteria and proteins, this waste is protein-rich due to the undigested proteins that were removed from the cells. **More than 99% of soluble toxins (called antigens) can be trapped by the body's lymph nodes.**

Lymph-Stasis Arising as a Primary Condition in Various Organs, or Partly So

"But besides some inherent defect on the part of the lymph-glandular system lymph-stasis would appear to rise primarily in some cases from such conditions as to tend to flood its channels.

These conditions are:

1. Deficient blood circulation from some cause, as in great prostration during the last days of an illness
2. Increased physiological action in an organ;
3. Acute inflammation from any cause.

In all 3 there is a tendency to overload the lymphatics and to disturb the adjustment either temporarily or permanently.

Reasoning on this basis one is not surprised to find strumous disease of the bones in growing children, in which case many factors may combine to bring about lymph-stasis.

In nearly every case of strumous bone or joint disease one gets some history of injury which may be viewed as the immediate exciting cause.

One word with regard to inflammation, Its clinical features will depend upon the specific cause in each case, as well as the constitution or state of health of the individual at the time of its onset.

Simple traumatism may lead to increased physiological action in the part, but extensive inflammatory changes are usually attributable to the introduction of some form of microbe, Waste Products, unless speedily carried away by the blood-vessels and lymphatics, will cause a "choking" of the lymph-glandular system related to the inflamed area.

If the lymphatics be functionally adequate little harm will probably arise as the result of the inoculation, but when the reverse obtains many specific organisms will find a congenial soil for their growth.

Everyone must be acquainted with the difference presented by the cicatrix which forms after a superficial inflammation in a strumous and in a non-strumous subject.

The hypertrophic aspect in the former may be due to defective absorption by the lymphatics." - Dr Wayland C. Chaffey, MD in "Lymph-Stasis, or, Retardation of Lymph as an Element in the Causation of Disease", 1889.

> ***"We strike at the source of life and death when we go into the lymphatics."*** *- Dr A. T. Still, MD, DO in "Philosophy of Osteopathy", 1899.*

The Concept of Drainages

Here one must state that:

The Concept of Drainages is one that every Emunctologists must always have present. When the activity from the Nerve Forces and the muscular plexus along any portion of the cerebrospinal system, from which organs or portions of the body receive their nerve impulse, are stimulated, this sets up a circulation that allows for refuse forces or drosses from the system to be carried out in a normal way and manner, this is drainage.

Not necessary that excesses only through the alimentary canal be increased in eliminations to make for proper drainages, but the muscular forces or tendons or bursae or the areas along the system where the nerve plexus produce the improper impulse need to be stimulated.

This is why; The activity through a Massage properly Osteopathically given sets up such drainages, better than the administering of those things that stimulate an already disturbed condition between the deep circulation and the superficial.

"If we can come to the rescue, by producing better drainage through the veins and excretory channels, we prove our ability as surgeons by using Nature's knife in place of the surgical knife of steel.

Growths in the abdomen, such as **tumours, only form when some channel of drainage is shut off.**

If we wish to stop or remove a growth of any organ in the abdomen, we must line up the body in good form for the appropriation of the arterial blood by the organ to which it was sent out by the heart; then fix all the vessels of drainage, turn the nerves loose, and the work will be done.

Too much use has been made of the knife, and **too little trust placed in Nature.**

It is equally important to have perfect drainage from the parts, for without it the good results cannot be expected to follow your efforts to relieve diseases above the neck.

The human head shows many effects, diseases, whose cause can be traced to lack of nourishing blood-supply, to poor drainage and exhausted fluids, which should be returned through the venous or thrown out through the excretory system. You see where the trouble is, and by that knowledge know that you must assist the obstructed drainage to the normal. Then your labour is done; the arterial and venous energies will take care of the necessary drainage and repair.

The human body will sicken and die from imperfect drainage, just as certainly as the inhabitants of a great city would become extinct by collapse or any method that would block the sewerage main, the vena cava of a great city.

The more we know of perfect drainage of the human body, the more satisfactory will be results obtained by keeping up the natural drainage, which should be perfect at all times.

As we have referred to the heart and lungs and to the importance of keeping them free from all obstructions, that they may do their work to the degree required of them by Nature, we must also by our reason embrace the importance of keeping the brain free from impingement by any stagnation in the face or neck that would diminish freedom of action to and from the brain, the known local center of nerve-action.

Our success as Osteopaths in treating Erysipelas depends altogether upon good nerve-action, blood-supply, and normal drainage.

We all know, if we have even a little knowledge of anatomy, that the coeliac axis branches out from the aorta just below the diaphragm, and supplies the pancreas, spleen, liver, and stomach. We know how the blood returns from each one of them, and also how the nerve-supply leaves the solar plexus to give blood-action to and from each organ of the abdomen.

Perfection in blood-flow, to and from all organs, must be perpetually normal or disease will show its work in lack of blood to supply the local or general nourishment to the organ that is diseased or starved for want of (clean and nutrient rich) blood.

If the arterial supply is good, **the venous and lymphatic systems must do the work of draining**, or we will have a large spleen or liver, a congested stomach or pancreas, all from the break in the blood, lymph, or nerve-chain of supply.

This law holds good in supplies, drainage, purity, and health of all organs of the system. The cause of uterine growths, and of diseases of the intestines, is absolute; Nature never changes.

To find the obstruction of the blood-and nerve-functioning is the object of the person who reasons and cures by Osteopathy.

You see that the supply and drainage of all the organs below the diaphragm is a complete system, which shows great and perfect wisdom in the plan and purpose for which it was formed and placed in position, to do the separate and combined work of the abdominal host.

When all do a perfect work, nothing but health can be shown as a result.

No disease can possibly come to any of these organs while supply and drainage are absolutely perfect.

If we wish to reduce the tumour, we must proceed to remove the obstructing causes, with the expectation of relieving and reducing the abnormal growths **through natural channels of drainage**.

I have reduced a number of tumours whose diameter was from 10 to 15 centimetres, without the use of the surgeon's knife.

I am satisfied that some tumours are not reducible, from the fact that they have passed the point of vital response before applying for a Osteopathic Treatment.

If so, we have no other question to ask.

We know the cause and should well understand and relieve the sufferer by opening up drainage, forwarding the best of blood for the repair of damages done by stagnant impurities.

To illustrate this thought, we will begin the preparation of diseased blood by deranging the colon from the rectum through the descending, sigmoid, transverse, and ascending colon or the caecum, which contains the gate of exit through which the fluids must pass to keep the faecal matter in a soft, digestible, and movable condition.

We will bruise, poison, ligate, kink, or twist the colon from the caecum to the descending curve on the left side.

If we stop the blood, we have stagnation, congestion, fermentation, death of fluids, and poisonous blood to be absorbed by the lymphatics and other members of the secretory family, and to be conveyed to the liver through the venous system. This diseased blood becomes the nourishment for the liver, which is expected to be healthy and act as a purifying laboratory, preparing substances through purification for blood - the blood of life, and not the blood of death, with poisonous impurities.

If we can come to the rescue by producing better drainage through the veins and excretory channels, we prove our ability as surgeons by using Nature's knife in place of the surgical knife of steel.

Growths in the abdomen, such as tumours, only form when some channel of drainage is shut off. If we wish to stop or remove a growth of any organ in the abdomen, we must line up the body in good form for the appropriation of the arterial blood by the organ to which it was sent out by the heart; then fix all the vessels of drainage, turn the nerves loose, and the work will be done.

Too much use has been made of the knife, and too little trust placed in Nature.

Much good health depends upon its good work, and much bad health and disturbance can reasonably be expected to follow imperfect Supply by arterial action or imperfect drainage through the venous and lymphatic vessels." - Dr Andrew Taylor Still, MD, DO, in "The Philosophy and Mechanical Principles of Osteopathy", 1902.

> *"If you would allow yourself to reason at all, you must know that sensation must be normal and* ***always on guard to give notice by local or general misery, of unnatural accumulation of the circulating fluids. Each set of nerves must be free to act and do their part.*** *Your duty as a master mechanic is to know* ***that the engine is kept in so perfect a condition that there will be no functional disturbance to any nerve, vein, or artery that supplies and governs the skin, the fascia, the muscle, the blood or any fluid that should freely circulate to sustain life and renovate the system from deposits that would cause what we call disease."*** *- Dr Andrew Taylor Still, MD, DO in "Philosophy of Osteopathy", 1899.*

Perfect Drainage

"At this point it will be proper to suppose a case by way of illustration.

Suppose by some accident the bones of the neck should be thrown at variance from the normal to a bend or twist. We may then expect inharmony in the circulation of the blood to the head and face with all the organs and glands above the neck. We will find imperfect supply of blood and other fluids to the head.

We may expect swelling of head and face with local or general misery.

Thus you have a cause for: headache, dizziness, blindness, enlarged tonsils, sore tongue, loss of sight, hearing, memory, and on through the list of head diseases. All because of perverted circulation of the fluids of the brain proper of any local division. It is important to have perfect drainage, for without it, the good results from a treatment cannot be expected to follow your efforts to relieve diseases above the neck.

“The arguments we have presented can be applied equally well to most pathological conditions not mentioned here. **Successful treatment of many diseases resulting from imperfect drainage consists of a well-balanced diet, suited in quality and quantity to the needs, rather than the desires, of patients.**

The outgo must keep pace with the intake. Any other treatment that stimulates activity, and does not enervate may effectively relieve venous congestion and lymph stasis. **Well-regulated, methodical exercises, and general hygiene are very important preventatives supplementing any other form of treatment. We should look well to our drainage systems and thus prevent the rapid encroachment of diseases in middle life** which are now taking as great a toll of human life as did the plagues of old.” - Dr George S. Weger, MD, “The Genesis and Control of Disease”, 1931.

Lymph Drainage Therapeutic Method

The Blood Vessel System

“We begin our search in the heart itself, in a small vehicle that we will call white blood cells. We can examine life more closely in the individual factories along the channel formed by our blood vessel network. At first we are surrounded by numerous smaller boats: the red blood cells which are loaded with **oxygen, the fuel for all cell activity.** The water in our current, is called plasma and is yellow: it contains nutrients and waste. Each heartbeat sends our small vehicle, in the incredible time of 23 seconds, through the whole blood vessel system (arteries, capillaries, and veins), until it has reached the heart again.

The Lymph Vessel System

Generally, this system is not so well known, because when we speak of “circulation” we always refer to the blood circulation.

The Lymph System Is The Origin Of Life. For the lymph is the nutrient liquid for the very first collection of cells, just as it is for that living palace of millions of cells; the complete human organism.

However, this system was discovered relatively late; there are 2 noteworthy 17th century scholars of the Lymph System: Pequet (1647), who discovered and named the cisterna chyli, and the Dane, Bartholin, who discovered the lymph vessel system, 3 years later.

Thus we live in lymph, i.e., our tissues are washed in lymph, it supplies us with the life-giving nutrients necessary for body development.

If we continue on our journey, we see how youth, life, and death are dependent on lymph and its renewal. Our vehicle has not left the capillaries through a small secret door and in this manner we can distinguish between the 2 circulatory systems. Lymph is a whitish fluid.

The flow in the lymph channels is sluggish and we glide calmly though, because there is no pulsation here coming from the heart, driving us forward every few seconds.

However, we still move forward with the help of a carefully thought-out valve system that prevents backflow: we pass thousands of filters until we reach the large lakes of the serous cavities.

In this way we can visit all the regions of the body from head to feet: the labyrinth of the ear, the membranes of the the brain and spinal cord, the pleura, etc. We run into flooded regions (oedema and infiltrations) and dry areas where life functions slower and cells degenerate because the lymph was the source of their renewal.

The lymph vessel system therefore, represents a type of sewage system, eliminating wastes produced by the working cells and carrying them to organs which get rid of them - the lymph nodes.

The Lymph Nodes

The lymph nodes are filters, whose function is to hold back and destroy the harmful substances, poisons, and bacteria. A lymph node consists of adenoid tissue, and like the spleen and tonsils, continually produces white blood cells.

These cells defend the body against invasion, and poisoning, and their activity is heightened during infectious diseases. So, what happens in the lymph system during an infection (for example; during a heavy cold)?

The body reacts to the invasion of bacteria in the nose with an immediate assembly of troops, a total security force.

The mucous membranes swell up, the lymph vessels and nodes enlarge, the white blood cells destroy bacteria and take them away.

Generally the battle is finished in the lymph nodes, which can be compared to castles.

It is fascinating to watch this process under the microscope and it gave rise to Claude Bernard conclusion:

> ***"It is the condition of the stability of the internal environment. Bacteria themselves are not the decisive factor, solely the surrounding territory."***

We should be aware that a poorly functioning lymph circulation lowers our defence, which opens the door to every infection:

1. Catarrh
2. Chronic Colds
3. Sinusitis
4. Sore throat
5. Angina

Etc...

This condition of congestion, which can be traced back to a worsening stagnation of lymph (stasis), also has a detrimental effect on one's appearance.

This is the deeper cause of a series of cosmetic flaws such as: Swelling, Reddening, Puffiness, Bags under the eyes, Pimples, Couperose, etc.

Stagnation of the lymph flow therefore has catastrophic results for health and beauty; the lymph circulation has to be stimulated again at all costs, and this is achieved with the help of Lymph Drainage.

Lymph Drainage cleanses the lymph, the swelling in the mucous membranes goes down, and consequently the cause of the problems is eradicated.

Natural Regeneration of the Skin through Lymph Drainage

We conclude our investigative journey by examining the skin.

We see that the skin cells wear out and, thanks to a process called mitosis, are constantly replaced by young cells. We have seen how the necessary, life-sustaining nutrients leave the blood with the help of osmosis, pass into the lymph, and thus reach the cells. Assuming this exchange cannot take place, the lymph vessels become blocked with stagnant, old lymph: the blood flows, to no avail, past each little secret door and transports the nutrients to another location.

This is how the body becomes poisoned by its own waste.

During my research work in the laboratories of the faculty in Copenhagen (1922-1924), under the direction of the renowned cancer researcher Professor Fibiger, the significance of the cell environment in lymph circulation for living cells, diseased cells, and dead cells, was suddenly clear to me. I understood clearly how the perpetual youth of the cell depends on this fluid (the lymph). Dr Carrel's experiments have supported my theories. He was able to keep Embryonic Cells Alive for over 10 years, whereas the normal life expectancy if only 4 to 5 years. This was possible thanks to the lymphatic milieu which was changed every day.

Conclusion

If the milieu and cell activity stagnate then the cells will degenerate, age and die. If the milieu is constantly renewed, then life flourishes and the cells divide.

Then the wrinkled and tired skin can regenerate itself, it becomes fresh and elastic, and the tired worn-out appearance in the face disappears. A real metamorphosis is experienced, a natural regeneration that comes from within. Our new therapeutic method is therefore based on these facts.

Lymph Drainage

After many years of clinical experience, and research, a rational method of treatment has been successfully developed which enables renewal of the lymph, activation of the circulation, stimulation of cell activity, and regeneration of the facial tissue.

Lymph Drainage is a healthy, natural, painless, and absolutely effective method which gives new basis to life, health and beauty.” - Dr Emil Vodder, in “Le Drainage Lymphatique, une nouvelle Méthode Thérapeutique, Revue d'Hygiène Individuelle, Paris, Santé pour Tous, 1936.

Osteopathic Treatment of the Lymphatic System in Disease

“A description of one technique attributed to Dr Still is found in an article by Charles F. Haverlin, DO, a student of Dr Still's.

The article, which purports to describe “original osteopathic moves as taught by Doctor Andrew Taylor Still”, contains the following account:

> To drain cervical lymphatics stand on the right side of the patient, in dorsal position, place the left hand on the forehead, and with the right hand reach over the sternocleidomastoid muscle, draw the muscles up closely around the chin, with pressure on parotid and sub-mental gland, turn the head away gently with the left hand, and continue this movement downward, one vertebra at a time, to the seventh cervical.

A member of the charter class at American School of Osteopathy, and a longtime disciple of Dr Still's, Arthur G. Hildreth, DO, attributes another treatment to Dr Still, reporting on a manual technique that Still may have used in the late 1870s or early 1880s.

A patient “noticed a lump on her neck just below the angle of the jaw on the left side,” wrote Dr Hildreth.

Dr Still concluded that the lump must have been an enlarged gland or lymph node. Dr Hildreth continued:

> [The patient] finally called on Dr Still.

He examined her and told her he could take the lump away and [he] began treating it by manipulation of the neck and then later on by manipulation of the gland itself. She was treated by Dr Still once or twice a week for 3 months, at the end of which time the growth had disappeared entirely.

George W. Riley, DO, the 1917-1918 president of the American Osteopathic Association, related another manual technique used by Dr Still. According to Dr Riley:

When congestion of the respiratory system was being considered... passing his hands over the shoulders and under the axillae [Dr Still] would say: “Don't fail to free up the circulation of the blood and lymph in these areas.”

Indeed the lymph and the importance of its unobstructed flow [were] accentuated by him almost on a par with that of the blood.

Yet another lymphatic technique that may have been utilized by Dr Still was described and demonstrated by E. Tracy Parker, DO, at an osteopathic medical conference in Toronto, Ontario, in 1934.

Dr Parker demonstrated a technique of lymph pumping that he had been using since 1925.

It required that an osteopathic physician place one of his or her feet in the axilla while the patient is lying in the supine position.

Dr Parker reported after the demonstration: "I had 3 men tell me afterward that they had seen Dr A.T. Still do the same thing."

Dr Barber wrote:

> ***"In the treatment of disease [of the lymphatic system] particular attention should be given to freeing the lymphatic circulation in the immediate vicinity of the enlarged glands. Manipulate the lymphatic glands carefully and thoroughly, rolling them between the finger and thumb, also work under them as deeply as possible. Place the hand lightly over the liver, if enlarged, and vibrate gently for 3 minutes. Treat in a similar manner any other gland which may be enlarged."***

In the 1930s, Yale Castlio, DO, and Louise Ferris-Swift, DO, described changes induced by splenic manipulation in asymptomatic subjects.

The manual technique they used to induce the changes consisted of applying alternating compressions to the spleen for 1.5 to 5 minutes at a rate of 21 compressions per minute.

They reported an increase in leukocyte count in 80% of the cases studied, with a decrease in erythrocyte count in 75% of the cases.

Drs Castlio and Ferris-Swift also found an increase in opsonic index in more than 80% of the cases and an increase in serum bacteriolytic power in 68% of the cases." - in "Manual Techniques Addressing the Lymphatic System: Origins and Development", Journal of Osteopathic Medicine, vol. 105, no. 10, 2005.

Stability of the Internal Environment

"Physiological functions are finely regulated, and the optimal functioning of the organism allows little variation of many parameters such as blood pressure, temperature bodily, etc.

This Regulation: Is all the more complex as the surrounding environment does not provide the conditions for this stability.

Also, **the organization must free itself from constraints external environment to maintain the stability of its internal environment.**

This notion of environment interior appeared for the first time in 1865 with Claude Bernard:

> ***"All the mechanisms vital, however varied they may be, always have only one goal, that of maintaining the unity of indoor living conditions. It is the stability of the internal environment that is the condition of free and independent life."***

The word “Homeostasis”, from stasis (state, condition) and Homoios (similar), was introduced in 1932 by Walter Bradford Cannon, who specified this notion:

Homeostasis does not mean immobility; this refers to a condition that can vary but which is relatively constant.

To maintain this balance, there are homeostatic mechanisms, which are found at all the biological levels, that is to say at the cellular level, but also at the scale of the organism or even the ecosystem.

If the cell or organism fails to maintain stability, an imbalance inevitably appears which leads to a disorder, even a disease.” - in “Physiologie Humaine”, 2 Ed., 2021.

Drainage in Glaucoma

> ***“A major link between Alzheimer's and Glaucoma has been discovered by British scientists that could lead to the eye disease being regarded as an early warning for dementia.***
>
> ***Scientists at University College London found a***
>
> ***“Clear link between what causes Alzheimer's and one of the basic mechanisms behind Glaucoma”.***
>
> ***The researchers discovered that the same “plaque” proteins are a key process in the development of both diseases.***
>
> ***Clumps - or plaques - of beta-amyloid proteins, which kill brain cells in Alzheimer's patients, also kill optic nerve cells in the eyes of Glaucoma sufferers, the study found.”***
>
> *- in “Glaucoma could be early warning for Alzheimer's”, Telegraph, 7 August 2007.*

“The cause of glaucoma generally is a failure of the eye to maintain an appropriate balance between the amount of internal (intraocular) fluid produced and the amount that drains away.

The aqueous humor is produced behind the iris, flows into the anterior chamber through the pupil, and exits the eye via the drainage angle between the iris and cornea.

Too much aqueous production or obstruction of its outflow from the eye causes a rise in Intraocular Pressure (IOP) that can lead to glaucoma.

An intriguing study reported in August 2007 indicates a potential common cause of both glaucoma and Alzheimer's, which creates brain lesions and accompanying memory loss.

Researchers in the United Kingdom who conducted the study found that buildup of a protein known as beta-amyloid in the eye's retina and in brain tissue appears to be associated with development of both glaucoma and Alzheimer's.” - in “What causes glaucoma?”, All About Vision, 15 September 2022.

The Vital Importance of Drainages

"To impress on your minds the vital importance of removing from the body the products of digestion, as soon as possible, and the very serious harm that results from leaving the evacuations too long in the bowel, I would remind you of experiments made by Dr Alexis Carrel, in the Rockefeller Institute in 1911.
He for the first time succeeded in growing living tissues on microscope slides, for which and other research work he received the Nobel prize.

He supplied to these tissues every day a quantity of nutriment.

He found that, if he washed away the products of digestion of these cells (in other words the material they evacuated), the cells grew and thrived.

If he Postponed Removing their Evacuations, and these were in contact with them for 2 days, the cells did not thrive so well.

If he left the material for 3 days the cells became languid and feeble, and if he left it for a longer period they died.

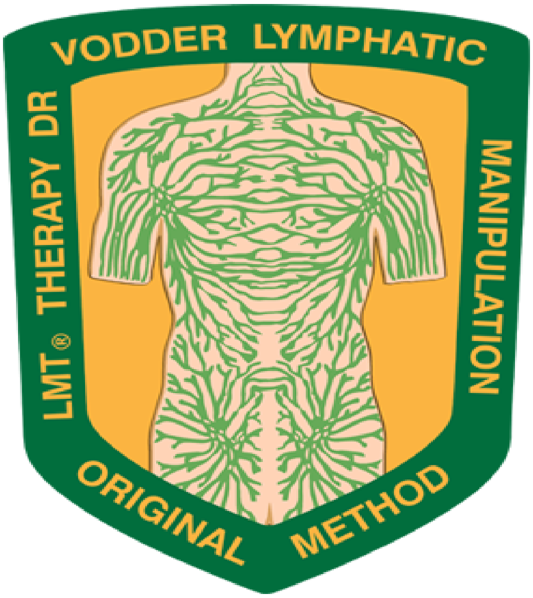
While a moderate amount of saturation of the cells by the products of their digestion lowered the vitality of the cells, a more prolonged insanitary state resulted in their death, in spite of food supplied to them in abundance daily.

The cells (which I saw growing in New York in 1911), are growing and thriving still, and will probably continue to grow indefinitely As Long as they are Provided with a Daily Meal, and a Daily Evacuation.

In Other Words:

There is No Such Thing as Death of Living Tissue providing its Drainage is Perfect, and it obtains a sufficient supply of food.

When the Drainage of these growing tissues is not properly attended to, the component cells Do Not Die of Starvation, but of Autointoxication.
The same applies to Humanity generally." - Sir William Arbuthnot Lane, in **"The Prevention of the Diseases Peculiar to Civilization"** 1929.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Chapter 27

The Vasomotor System

"The Law of the Artery is Supreme. The Artery is the father of the Rivers of Life, health, and ease, and its muddy or impure water is first in all disease." *- Dr A.T. Still, MD, DO, 1897.*

"The Basis of Manual Therapy, according to Dr John P. Arnold, MD, can be looked for in the Vasomotor Mechanism. This Should Be Thoroughly Understood by the Physician." *- in "JAMA", 6 June 1903.*

"The largest nerve-cure is that which tries to comprehend all the forces that make, and mar the nerves; the wisest is that which discovers the individual need that exists in every case and ministers to it." - Dr H. C. Sawyer, MD, in "The Matter with Nervousness", 1909.

"Upon the Principle that the Blood Is Our Curative Agent; will this blood not give us the best indication of destruction going on within the body?
All the tissues of the body are bathed with Blood and Lymph; and it seems only natural to look to the blood for pathology within these tissues." *- in "Applied Anatomy of the Lymphatics", 1922.*

The Vaso-Motor Nerves

"The contraction as well as the dilatation of blood vessels is regulated by the spinal cord, by means of special nerves which are called Vaso-Motor.

The Vaso-Motor Nerves come from the spinal cord, as was first recognized by Waller and Budge (Vulpian's Leçons sur l'appareil vaso-moteur).

They pass out with the roots of the spinal nerves, and then reach their peripheral terminal expansions by various routes.

We can arrange these routes into 2 main groups:

1. A large majority of the vaso-motor nerves leave the spinal nerves with the rami communicantes, and with the latter enter the great sympathetic. They run a short distance upward or downward in the great sympathetic, and then leave it in two ways:

I - As independent branches of the great sympathetic, as they are represented, for example, by the splanchnic nerves, which, I may remark, contain the principal mass of the vaso-motor nerves for the abdominal organs.

II - After they have ascended or descended a distance in the great sympathetic, they return again by means of rami communicantes to the spinal nerves, and together with these reach the parts which they supply. This arrangement holds good for the skin, the muscles , and the bones. Thus, for instance, the vaso-motor nerves of the foot leave the spinal cord with a series of roots of the dorsal and lumbar nerves, descend in the great sympathetic, leave it deep in the pelvis, and reach and enter the sciatic nerve by means of a small communicating filament.

2. A considerable number of vaso-motor nerves do not enter the sympathetic at all, but go directly into the corresponding spinal nerves, and reach their terminal expansions with them. Thus, the hind-paw of the dog receives both the previously mentioned nerves, which enter the sympathetic, and, on the other hand, the last-mentioned nerves, which come directly from the spinal cord with the roots of the sciatic, and reach the paw with the branches of that nerve. It will be convenient for the further discussion of this subject to designate the last-mentioned class as the direct, and the first-mentioned as the indirect supply." - in "The International Encyclopedia of Surgery", Vol.1, 1881.

Real Osteopathy

The Science of Osteopathy; is not merely the punching in a certain segment or the manipulation of the bones, but is the keeping of a balance, by the touch between the Cerebral Spinal System, and the Sympathetic System. That's Real Osteopathy.

Cardinal Principle of Osteopathy

"It is a Cardinal Principle of Osteopathy that blood flow must be free; that if it be net so disease results: and the Osteopath must go to work to remove every barrier to perfect circulation.

This necessitates a full knowledge of the anatomy and physiology of the circulatory system.

> ***"The moment of interference in this life stream marks the beginning of disease.***
> ***The Osteopath must know how the blood is driven away from the heart, where it goes, what it does, and how it is returned."*** *- Dr Andrew Still, MD, DO*

To move, breathe, think, to have an emotion, is to affect the circulation, sometimes profoundly.

Any one may, by the simplest means, affect the circulation, but to know when and how to do this, within the limits of safety, to the best advantage of the ease, and how to find and remove the cause of disordered circulation, which is resulting in disease, is the work of the skilled Osteopath.

It is the purpose of this paper to present the results of a careful study of this matter, from an Osteopathic view point, in order to contribute to a clearer understanding of just how we may gain curative effects by adjusting and controlling the circulation.

It seems that this end may best be accomplished by manipulation of the blood en masse. The blood mass is an entity.

It is a tissue of the body, just as are the muscular, nerve, or bone tissues.

It, like they, is liable to various mechanical disarrangements, with resulting ill effects upon the health.

Any disturbance of the blood mass in one part may, and usually does, affect it in another.

Familiar illustrations of this important fact are seen in:

1. **Itching Nose in portal congestion.**
2. **Congested Throat in uterine disorders.**
3. **Sneezing from Uterine irritation.**
4. **Hemorrhoids in congested Liver.**
5. **Etc.**

As a mechanical factor in the etiology of disease, the mechanical status of the blood-mass constantly attracts our attention.

This is a great fact, and its proper appreciation by the Osteopath is of importance, that he may correctly diagnose conditions, and that he may intelligently handle the blood in order to mechanically correct and restore to proper form and condition this fundamental tissue of the body.

By proper treatment, the blood-mass may be so manipulated as to dispose its bulk, and portions thereof, as best to aid the health of the parts we seek to influence. Quantities of blood may be drawn to, or away from a part of the body, and so arranged as to restore the equilibrium of the circulation, and equalize it throughout the vascular system to the best advantage of health.

In many cases the success, at the time of treatment: depends largely upon how we handle the blood-mass.

It is seldom, if at all, that the blood is affected locally alone.

If affected at all; it is en masse.

A congestion at one point means less blood somewhere else.

This is corrected only by proper rearrangement of the blood-mass, with a resulting restoration of vascular equilibrium.

Reflex Muscular Relations, throughout the body, are marked.

It has been shown that **ice, held in one hand, makes it first cold and anaemic, then hot and red, and that similar changes of lesser degree occur in the other hand.** According to Eccles, Massage of one limb increases its circulation and temperature, and that of its fellow likewise.

There is a Close Relation between Skin and Abdominal Circulation.

Burns and Scalds upon the surface of the body produce internal congestion, inflammation and ulceration.

Any Manipulation of the Body at once Affects Circulation.

A mere stroke upon the surface of the skin is followed by a white line, quickly changing to red, by reason of the Vasomotor Reflex Aroused.

All the natural agencies of the circulation may, by Osteopathic Treatment, be quickened in their action.

By appropriate Osteopathic Manipulation, the heart-beat may be made quicker and stronger.

Pressure and motion applied to the thoracie and abdominal walls aid and quicken their natural play and affect circulation.

Muscular motions given to the limbs, spine, or neck, simulate the effects of the natural play of the muscles; squeeze and pump the Blood and Lymph out of the tissues and along their natural channels.

The periphery of the body is our great field.

Wherever we treat it we affect the Blood flow, Directly or by Reflex.

Sensory impulses, resulting in reflex motor action, may reach the Vasomotor Reflex Centers through the sensory nerves of the cerebro spinal system.

Baruch goes even further in saying that probably; **all the sensory cutaneous nerves of the body congregate in the Vasomotor centers in the medulla, where they connect with all the Vasomotors of the arteries of the body; also that the nerves supplying the vessels of the pia mater experience a steady tonic excitation from the cutaneous sensory nerves.**

Graham shows that light friction of the skin quickens the heart-beat.

It is clear that any work upon the body must, every: where and always, profoundly affect circulation in the body.

Greater importance is the fact that the Osteopath, by the repair of the many lesions which he finds, remove from the periphery the irritation which is keeping up a permanent disturbance of Vasomotor Equilibrium, with its numerous resulting ills.

This results in a rearrangement of the various portions of the blood-mass; Congestions are let free, local Anemias are overcome, the caliber of the vessels is readjusted, and Vascular Equilibrium is Restored.

As we well know, Irritations produce Vasomotor Changes in Remote Parts, and MeGillcuddy, says that the A**nemias or Congestion thus produced Causes Pain. An example of this is seen in Frontal Headache from Gastric Irritation.**

We know from experience that **these sources of irritation are often Osteopathic Lesions.**

Just in line with these facts is a class of cases frequently met.

The patients, suffer from soreness and aching in the calves of the legs, feet, palms, and often in the joints.

They are sore to the touch along the spine; often the whole flesh is very tender.

General nervousness and weakness mark these cases.

They always show marked spinal lesions, and usually, abdominal or pelvic disorders.

Irritation from these sources arouses Abnormal Vascular Reflexes, causes:

Anemia or Congestion of joints, feet, calves, palms, spine and flesh, resulting in pain and in soreness on pressure.

Correction of lesion is the radical cure.

These cases always show marked improvement as soon as spinal abdominal and pelvic circulation is toned.

Light preliminary treatment, to lessen the soreness by rousing circulation, is often necessary before the real and radical treatment can be carried on.

Mechanical work upon vessels is often an important aid in regulating blood-flow.

For example: Ziegenspeck shows that, **in cases of congestive headache, momentary pressure upon the jugular veins causes the blood to backset in the tributaries of these vessels, dilating them back to the capillaries, after which, on account of the dilation, the flow is free and the congestion is relieved.**

This principle may be applied to any large vein that can be reached by direct pressure.

I have used it with **immediate results in the form of reduction of the swelling in acute inflammation of the tonsils.**

McClellan shows that the sub-elavian vein is attached to the back of the clavicle and follows the movements of that bone.

Our treatment applied in "raising the clavicle" thus stretches and pulls this vessel considerably, while at the same time the pressure of our fingers, applied behind the bone, causes a momentary stoppage of the flow, with a consequent backsetting of the blood and dilatation of the vein and its tributaries, with a resulting freedom of blood flow.

I have seen Dr Still, thrust his thumbs strongly against the femoral arteries for the period of one heart-beat, causing a brief stoppage, followed by a stronger effort of the heart, and thus acceleration of the whole circulation.

Stevens calls attention to the old-fashioned method of stopping hemorrhage in pulmonary tuberculosis by the application of a temporary ligature to one or more members, which hinders the flow of blood in the veins, and may materially aid in checking the bleeding.

That is to say, that slowing the circulation at one point effectually slows it throughout.

Stoppage at one point in the circuit affects the whole blood-mass. So it is in disease. A congested liver means a congested portal system, as evidenced often by hemorrhoids.

It means also congested cerebral vessels, as evidenced by the headache commonly present in these cases.

It is clear that the blood responds en masse to conditions affecting the vascular status at any given point, the effect upon the mass being, of course, in proportion to the influence exerted upon it.

By the application of the principles described we may, by Osteopathic Treatment, alter vascular states, re arrange the bulk of the blood-mass, and restore Vasomotor Equilibrium.

From the view-point of regulating the disposition of the blood-mass, work upon the abdomen, together with that part of the spine from which springs its nerve supply, is by far the most important.

Its vascular relations with all other parts of the body are so intimate that the condition of its circulation becomes at once important when we desire to reach the circulation to other parts.

Changes in the digestive tract and uterus manifest themselves by irritations throughout the whole of the spinal column, the entire nervous system, and, by the spinal and cerebral nerves, all portions of the body respond to these changes.

The skilful diagnostician takes account of this relation, and looks well to the vascular status of the abdominal viscera in reading the signs of disease.

The abdominal veins can dilate enough to receive at least 1/3 of the total blood-mass.

We can call to or send from these vessels large quantities of blood, with important effects.

For example, pressure on the solar plexus and abdominal treatment often relieve congestive headache.

These abdominal veins possess no valves, but are supplied with vasomotor nerves. They are easily dilated, and are thus prone to disturbance, their circulation being readily impeded.

Byron Robinson shows that their tonus depends much on the state of the abdominal walls.

If the latter are lax, abdominal circulation becomes sluggish by reason of decrease of intra abdominal pressure, allowing of dilatation of the veins and retention of the blood.

This leads to a long train of evils.

Campbell says that; flaccid abdominal walls allow of flatulence, costiveness, ptosis, and accumulation of blood in the portal area.

Hence the importance of keeping free from lesion that portion of the spine supplying nerves to the muscles of the abdominal walls, in order to keep the walls themselves in a proper condition to help maintain perfect vascular conditions in the viscera behind them. Strong abdominal muscles are natural stays.

Of greater importance is the removal of all lesions from the splanchnic area of the spine, whence come the vasomotor nerves of the abdominal vessels, described by Flint long ago as the most important vasomotors in the body.

As a matter of fact, both the splanchnic nerves and the nerves supplying the abdominal walls arise from the same area of the spine, as the walls are innervated from the last seven thoracic nerves.

Hence the same lesion that affects the bowel through the splanchnics will sometimes affect the walls through these 7 nerves.

We occasionally meet eases in which, on this account, lax abdominal walls accompany conditions of marked Constipation.

Restoration of tone to the walls always favourably affects the Constipation.

By reason of the connection of this important splanchnic vasomotor supply with the reflex nerve mechanism of the heart we have the so-called depressor Nerve Phenomena.

From the heart, under proper conditions, come impulses, by way of the cardiac depressor nerve and the medulla: which, acting through the bulbar vasomotor center, cause a dilatation of the splanchnic and other vessels.

They, dilating, receive from the system a large amount of blood, with the result that general blood-pressure is lessened, arterial tension falls, and the heart-beat is quieted. Thus the depressor nerve mechanism acts.

Anything suddenly lessening intra-abdominal pressure or tension allows these easily-dilating abdominal veins to receive a large quantity of blood from the system.

This may go to such an extent that grave results follow.

Campbell calls attention to cases of fainting in women upon removal of the corsets.

The sudden removal of the support they afforded to the abdominal walls lessened intra-abdominal pressure and allowed of the gravitation of blood to the abdominal veins in quantity sufficient to produce cerebral anemia and syncope.

He calls attention, to cases of syncope in men, due to suddenly arising from bed at night and emptying a full bladder.

This act so lessens intra-abdominal pressure as to allow of vascular dilatation and cerebral anemia. Indeed, cases have been recorded in which so great and sudden was the determination of blood to these abdominal veins that not enough was left in the arterial system to keep the heart going, with the result that death ensued.

Hence has arisen the expression:

"Bleeding to death into one's own abdominal veins."

On the other hand, according to Campbell, powerful contraction of the abdominal muscles raises blood-pressure by compression of the abdominal vessels. He says that vomiting after cerebral concussion, which is usual, compresses the great splanchnic veins and replenishes the heart.

Compression of the belly may increase the work of the heart, 30% by squeezing the blood from the splanchnic area into the other vessels.

He says that the abdominal veins are very susceptible to pressure, and quotes Leonard Hill to show that squeezing the blood out of them into the heart stimulates it and re-establishes circulation.

It has even been demonstrated, experimentally on animals, that, after section of the spinal cord, which paralyzed the vasomotors and allowed the blood to collect in the splanchnic veins, emptying the heart, pressure on the abdomen squeezed the blood into the heart again and re-established circulation.

Treves points out that the skin of the abdominal wall is supplied from the last 7 dorsal nerves, which also give origin to the splanchnic nerves.

These facts illustrate not only the importance that the Osteopath attaches to examination of this portion of the spine in splanchnic disease, but they also point to the importance of a close examination of the splanchnic spine in circulatory disorders, and to the far-reaching effects that may be gotten upon the circulation by appropriate treatment of spine and abdomen.

There is a still wider relation existing between vascular states in the abdomen and those in other and distant parts of the body.

There is a close reflex relation between the abdomen and the head.

According to Dr Byron Robinson, MD (1855-1910), a blow on the solar plexus causes syncope by Reflex Action on the heart via the Vagus.

Reflex Irritation from the Stomach causes Headache by congesting the cerebral vessels.

Flatulence and ascites, says Campbell, press blood out of the splanchnic veins into the system, and the work of the heart is increased.

Flatulence and constipation, for such a reason, cause dizziness.

Robinson, says that cerebral circulation is disturbed in Constipation by reflex irritation from the abdominal viscera via the lateral chains of sympathetic ganglia: the splanchnies, and other sympatheties.

Dizziness, results from pressure of feces, upon the hemorrhoidal plexus of nerves. We continually meet these cases.

When the subject of such a complaint is an elderly person of full habit, the tendency to apoplexy is greatly increased.

In such patients a little excitement or exertion **may readily cause an apoplectic seizure.**

It is well, in all cases, to look well to the condition of Bowel, Liver and Stomach in order to Equalize Circulation, remove irritation and lessen vascular tension in the Brain.

Many would never have suffered the Stroke had this simple matter been attended to.

Elderly persons, who have recovered from a Stroke, with resulting Hemiplegia (Paralysis that Affects only 1 Side of the Body), are often Flatulent and Constipated.

These factors greatly increase the well known tendency of such cases to suffer another Stroke.

In the management of them, frequently under our care for Hemiplegia after the first attack, **it is imperative to look well to all these Abdominal Conditions.**

Dr Still, makes use of this Relation Between Circulation in Abdomen and Head.

In the treatment of Apoplexy (unconsciousness or incapacity resulting from a cerebral haemorrhage or stroke), Dr Still forbids the use of the customary cold application to the head because it deadens or congests instead of freeing circulation.

But he directs the application of heat to the abdomen, which dilates the abdominal vessels and calls the blood from the head.

Colic and diarrhea, with resulting abdominal irritation, cause spasm of the arteries of the lower limbs and a rush of blood to the head.

This furnishes us another reason for looking well to the abdominal status.

Further effects of abdominal conditions upon vascular states in other parts of the body may be pointed out.

In Peritonitis, the waxy paleness of the surface of the body is due to reflex irritation from the peritoneum leading to intense vaso-constriction of all the superficial vessels. The patient dies, from circumference to center.

Irritation from any viscus is liable to cause vaso-constriction, while nervousness contracts the peripheral arteries and affects the heart.

There is a Close Relation Between Abdominal conditions and circulation in the feet and lower limbs.

It is common to meet persons suffering from digestive disturbance who are weak in the lower limbs. Weakness of the leg is noted in people with tape-worm.

Nervous persons, suffering with congestions of abdominal organs, have cold hands and feet. Treatment of the lower limbs affects circulation in the abdomen.

Likewise a proper abdominal treatment quickens circulation in the legs.

Vasomotor disturbances in the lower limbs, due to abdominal conditions, sometimes become marked and may produce even functional paralysis in these members.

McGillicuddy shows that:

Digestive and Uterine Disorders; Cause Cramps and Aching in the Lower Limbs by Reflex Vasomotor Effects, and extreme coldness of the extremities; that Ovarian Irritation Causes Spasmodic Vasomotor Activity, and may even produce Functional Paraplegia; that One of the First Signs of Uterine Disease is weakness, and weariness of the back and limbs; that irritation from the digestive and genito-urinary systems causes contraction of blood vessels, which may be great, and long continued enough to lead to atrophy; that similar irritations, by causing contraction of the vessels of the cord and lack of arterial blood in it, may lead to Functional Paraplegia.

In certain cases so great is the loss of tone in the abdominal vessels that practically a Vaso-Motor Paralysis results, and the aggregation of blood in the splanchnic veins becomes a cause of considerable enlargement of the abdomen, sometimes simulating pregnancy.

Such cases I have seen respond easily to treatment.

Among the abdominal organs the liver and the spleen deserve special mention for their relation to both abdominal and general circulation.

The splenic vein, into which empties the inferior mesenteric, unites with the superior mesenteric vein to form the portal vein.

Practically All of the Abdominal Blood Flow thus passes through the Liver.

Any interference with free flow through this organ upsets abdominal circulation, which, in turn, disturbs the blood mass throughout the body.

The hepatic plexus, an offset of the solar plexus, sends its branches to accompany the blood vessels throughout the liver and to ramify to the remotest corner of the organ. This plexus rules circulation in the liver. It is prone to irritations from other viscera, with which it is closely connected by sympathetic nerves. Hence it is important that all sources of irritation should be removed.

Spinal lesion in the splanchnic area is most important in this relation.

The portal system alone can contain 1/3 of all the blood in the body, or even more. Thayer, is authority for the statement that **extremes of emotion or severe pain may reflexly lead to such a dilatation of the abdominal vessels that they contain the greater portion of the blood, resulting in cerebral anemia and syncope and under such conditions one may actually bleed to death into his own portal system. Heart failure after extreme emotion is due to such a cause.**

The diversion of a considerable quantity of blood to the liver serves an important purpose, often, as it is shown that the liver thus acts as a shunt in certain emergencies preventing the blood from returning to the heart in dangerous amounts.

Byron Robinson enunciates what he styles the law of vascular engorgement and elastic capsules. **All the viscera are supplied by the sympathetic with automatic visceral ganglia.** Every visceral organ is during activity, in a state of vascular congestion, turgescence, or enlargement.

The liver has its normal and regular rhythm, contributed to it by its elastic capsule of glisson, its automatic sympathetic ganglia, and the active functioning of its vessels and cells.

Any irritation interferes with its rhythm, deranges function, and produces malnutrition.

Spinal or other lesion to the nerve-supply of the liver produces various irregularities of rhythm and disease follows: It is our duty to seek and remove the lesion acting as the source of irritation.

The full import of the results we attain can be judged only upon an **understanding of the relations that the liver bears to the circulation as a whole.**

The emphasis laid upon the importance of thorough Liver Treatment, especially in all eases of liver disturbance, has been none too great.

As to the Spleen, its relation to the circulatory system is unique.

Its function is such that the blood passing through it must empty out of the vessels bringing it into the organ so that it may come into intimate relation with the splenic pulp. Such being the case, provision must be made for the forcing of the blood out of it into the circulation again.

This is provided for by the structure of the capsule and trabeculae, which are supplied with a large amount of unstriped muscle tissue.

This capsule is supplied by the splenic plexus of the sympathetic, and by virtue of its rhythmic action the blood is passed along.

The Spleen is mechanically a part of the Vascular System.

> ***"The Spleen, is as exclusively connected with the Circulatory System, as is the Heart."*** - *Hall*

McClellan styles it a Blood Diverticulum. **It is altogether probable that the spleen exerts an actual propelling force upon the blood.**

I recall the case of a woman in whom the spleen was greatly enlarged, its dimensions being about 25 centimetres by 30 centimetres.

Lesion existed in the form of subluxation of a rib in such a way that its shaft pressed upon the capsule.

Dr Still held that this, causing a paralysis of the capsule, allowed of the great dilatation and engorgement with blood.

Treatment soon caused a considerable diminution in the size of the spleen, and several boils appeared, the probable result of absorption of the dead blood.

The Osteopath may make practical use of these facts relating to abdominal circulation, and its effect upon other parts of the body.

By Relaxation of the Abdominal Walls and Viscera, and inhibition of the splanchnic nerves and solar plexus the Osteopath may draw the blood in quantity to the abdomen, lessening vascular tension in the body, and quieting the heart, by arousing the action of the depressor nerve mechanism.

On the other hand, **by pressure on the abdominal walls and by quick, stimulative work over the abdomen and splanchnic spine, the Osteopath may raise vascular tension in the body and quicken and strengthen the pulse.**

The Osteopath may, by direct treatment of a viscus, relieve it of congestion or draw to it blood which it lacks. The Liver is in an exposed position, and offers a very accessible field for treatment.

By direct mechanical treatment upon it, through the abdominal walls and beneath the ribs, it may be compressed, squeezing the stagnant blood in its vessels against the vessel walls containing it, rousing them to action stimulated thereby. The hepatic plexus may, by such treatment, be roused to action, impulses thus generated being carried by its filaments throughout the liver, to every distant vessel and cell.

The spleen may be treated in a similar manner, with similar results.

Blood status in the feet, limbs, cord, brain and all parts of the body may be influenced and regulated by proper abdominal work.

It is well to know these facts for the light they throw upon the diagnosis of multitudes of diseases, and for the intelligent perception of conditions, pathological and therapeutical, that are met or used.

By understanding how the blood mass is affected in disease and how it may be influenced in the treatment of disease, one is better able to use it to advantage.

Knowing the secrets of the circulation, the most important thing to accomplish is the removal of the first cause of its unbalancing; the lesion which, however it acts unsettles the equilibrium of the blood mass, and, soon or late, produces small ill or widespread disaster, according to the conditions of the case.

Manipulation of the blood mass, as outlined above, occupies an important place in our therapeutics, but it is not first in importance, and would indeed be futile without also accomplishing that most important and distinctive function of the Osteopath, namely, the removal of the lesion.

This done, or in the process of being done, the blood mass may be manipulated in accordance with the above facts and principles, but first causes must he removed to effect radical cures.

The play of the thorax has important consequences upon the whole circulation.

Its inspiratory action results in aspirating the venous blood from the abdomen and lower parts of the body into the right heart.

It also sucks the venous blood out of the head, neck and arms.

Pressure in the veins is less than in the arteries.

From the left heart outward, until the circuit of the blood is finished, blood pressure steadily falls, so that it is normally least of all in the thorax, where it is always negative during inspiration.

The pulmonary arteries possess slight tone and great distensibility.

The resistance in the pulmonary capillaries is very low.

Inspiratory action not only aspirates the blood into the right heart, but it also lowers the pressure in the pulmonary artery by lessening resistance in the whole lung circulation, as must naturally follow when all the diameters of the chest are increased by the free raising of the ribs in inspiratory action.

The thin walled auricle and veins expand under negative intra-thoracic pressure in inspiration to receive blood which at that time rushes into the thorax.

The lung vessels are exceedingly distensible, readily accommodating a considerable afflux of blood in an emergency.

Thus the lung circulation acts as a shunt, as does the liver, safeguarding a possible dangerous overflow of blood upon the left ventricle, as does the liver for the right ventricle.

Mechanical stimulation of the heart results from the inflow of the blood due to negative intra-thoracic pressure. Free abdominal and free diaphragmatic play aid free thoracic play in its effect upon circulation.

During inspiration, when the ribs are raised, lessening intra-thoracic pressure, the diaphragm descends, thus increasing intra-abdominal pressure, with the result that the blood is thus squeezed out of the great splanchnic veins just at the time that it is sucked into the thorax and right heart by inspiratory play.

The reverse of this, of course, is true as well.

Particularly is it true, according to Campbell, that during diaphragmatic inspiration intra-abdominal tension is increased at the time that intrathoracic pressure becomes negative.

The pressures in these two cavities thus run counter, with a most important resulting effect upon the circulation.

Lack of free diaphragmatic play, then, interferes with circulation.

The lymph is pumped from the peritoneum into the pleura, through stomata in the diaphragm, by respiratory movements of the thorax and diaphragm.

Its flow in the lymphatic vessels is chiefly aided by muscular activity and negative intra-thoracic pressure.

So important an influence has diaphragmatic play upon lymph flow that, ascites is often prevented by the active movements of the midriff.

Oedema and ascites, are counteracted by free lymph circulation due to respiratory capacity and exercise.

Inspiration expands all the pulmonary and pleural lymphatics and sucks the fluid into them, while expiration accelerates its flow.

Inspiration also favours lymph flow by lessening pressure in the large veins into which the ducts enter.

Preaching, speaking, declaiming, singing, all induce active use of the lungs, active thoracic play, and thus are good in all forms of passive engorgement of the lungs, as, for example, from heart disease.

Singers are remarkably free from pulmonary diseases.

Not only has inspiratory action an important effect upon circulation, but so, also, has expiratory action.

Expiration drives the blood out of the pulmonary vessels.

It is a most important aid to arterial circulation, increasing arterial tension and helping to drive the blood to the furtherest cell in the body.

During forcible expiration intra-thoracic pressure changes to positive.

This positive pressure may be raised very high by appropriate manoeuvres.

Campbell shows that a forcible expiration causes loss of the radial pulse by compression of the subclavian arteries by strongly raised first ribs, and that forced effort at expiration, with closed glottis: raises intra-thoracic pressure to such a height as to cause serious pressure upon the heart and intra-thoracic blood vessels, and seriously interfere with circulation.

From these considerations it is clear that the mechanical means prepared by nature to secure free thoracic and diaphragmatic play must, in the interests of health, be intact. "Thoracic mobility is natural and necessary to health."

Sluggish rib play means sluggish lung circulation with its tendency to disease.

McGillicuddy points out that flattening of the chest through the shoulders falling forward favors lung disease by lack of expansion.

Campbell shows that people with feeble muscle systems are likely to develop phthinoid chests through mere inactivity of the thorax.

A familiar illustration of the harm resulting from restricted thoracic play is seen in obese persons, who are notably subject to chronic bronchitis.

The simple weight of the fat collecting about the thoracic walls prevents their being freely expanded, with the result that both thoracic and diaphragmatic free play are prevented and **stagnant lung circulation and bronchitis are favoured.**

Upon this account such diseases are more dangerous in the obese.

Lack of free rib play is seen in persons suffering from emphysema, in whom the distended, barrel-shaped chest becomes rigid, the sternum and ribs rising and falling as one piece and the distended lung alveoli stretching out the lung arterioles and capillaries, impeding circulation.

For these reasons enlargement of the right ventricle, which develops to force the blood through the impeded vessels, becomes a feature of emphysematous cases.

In a similar way, persons with scoliosis, in whom the chest becomes compressed on one side, limiting free play of the thorax: and obstructing lung circulation, develop enlargement of the right ventricle.

Lack of free rib play means an unexpanded or poorly expanded lung, and this, as Campbell shows: means that in it are many collapsed alveoli.

Thus people with flat, narrow, or phthinoid chests are notably subject to pulmonary tuberculosis.

The weak chested are always at a disadvantage in emergency.

Campbell, in commenting upon the fact that external compression of the chest lessens and retards the output of the heart and affects circulation, states that in crowds in panic, women and children with compressible chests are first affected, while the strong, such as men with rigid chests, escape.

It is clear that a robust chest is a desirable agency of health.

Persons with a tendency to heart, lung or circulatory diseases should by all means cultivate the thorax.

Every person should make a habit of breathing deeply.

These considerations point out one of the most fruitful fields for the Osteopath's work.

We know from experience **what bad results follow rib lesion, and how important it is that all ribs, thoracic vertebrae, and spinal and intercostal muscles and ligaments, all of which go to make up the thorax, be in right mechanical condition. The importance of the Osteopathic Treatment, which repairs all such lesions, cannot be too strongly insisted upon.**

Hall shows that; **the intercostal nerves carry motor fibres of both inspiratory and expiratory muscles. Rib or Spinal Lesion to the intercostal nerves compromises the muscles of free thoracic play.**

The Vasomotors for the pulmonary vessels pass from the cord by way of the thoracic spinal nerves from the 2nd to the 7th.

Any rib, spinal or other lesion of these nerves or their various branches may reflexly influence lung circulation, as well as interfere with the mechanical work of free thoracic play.

It is easy to see that:

Quite as important as free play elsewhere, is free spinal play, with its resulting freedom of all nerves or vessels that leave or enter the spinal-canal.

Lack of free spinal play is likely to affect these, as well as to limit free play in the thorax.

Free circulation to and from the cord and spinal tissues depends as much on the affects of free motion here, as does the circulation in any part of the body depend upon general free play.

McClellan shows that the **spinal veins are prone to congestions by reason of the fact that they have no valves.**

Various lesions often combine in a way to produce the most profound effects by hindering thoracic and spinal free play, congesting spinal centers, compromising lung circulation, and thus that of the whole body.

These results are often met in simply flat chested people, but are best illustrated in a numerous class of cases who have been markedly affected by La Grippe (Flu, Influenza), in its commonest, or so-called spinal, form.

Here the spinal muscles have been greatly affected, being much contractured, and often more or less atrophied.

The spinal muscular system loses its proper tone.

Spinal activity and circulation have been reduced sometimes to such an extent that the cord itself is insufficiently nourished, affecting spinal centers and nerves.

This, aided by muscle contractures and atrophies, as well as by nerve and central lesion, the thoracic bony parts lose their perfect adjustment, and rib and vertebral lesions readily occur.

Often these cases become flat chested, all the ribs having slipped a little downward, (prolapsus of the thorax) often being partly off their articulations at the head and tubercle. Thus it becomes mechanically impossible for these cases to have thoracic or spinal, or abdominal, or diaphragmatic free play. They are always poor breathers. I have often had them complain to me that an attempt at deep breathing required more muscular energy than they could well command.

It is impossible for the weakened muscles to freely raise the prolapsed ribs.

Prolapsed ribs and contractured or atrophied spinal muscles at once congest the cord and its centers.

Anatomically the intercostal arteries, arising from the aorta, each divide into an anterior, or proper intercostal branch, and a posterior or dorsal branch.

The latter subdivides into a muscular branch, supplying the muscles and integument of the back, and a spinal branch, which supplies, in part, the cord and its membranes. By reason of the ribs being prolapsed and approximated, and the spinal muscles contractured and atrophied, these vessels, excepting only the spinal branches, are variously stretched and compressed with the probable effect of crowding the blood back upon the cord, congesting it.

This is the gist of what is known to Osteopaths as “Hart’s Theory.”

These facts may serve to explain the profound effects often exerted upon the nervous system by La Grippe. There can be little question that these causes produce stagnant circulation in the spinal cord directly, as well as aiding indirectly to bring about the same result by limiting thoracic, spinal, diaphragmatic, and abdominal free play, thus stagnating or unbalancing the general circulation.

We occasionally see cases of sufferers from the sequelae of La Grippe, in whom these causes have gone to the extent of so robbing the cord of nutrition as to result in locomotor ataxia, spastic paraplegia, or other paralyses.

A study of the literature of this subject shows that the books are full of important observations regarding disease that add materially to our proper conception of its nature, but that in them little or no practical use of these points is made in a definite therapeutic way.

They are all for Drugs and Doses, but realize that These Are Largely Futile.

The Osteopathic idea, namely, that of lesion causing disease and its removal causing cure, is totally wanting in every other system.

Possessing this open secret of nature, we possess the open sesame to the treasure-house of health. The pressure of a first rib or clavicle upon the subelavian vessels may slow the circulation in the entire body; the luxated vertebra in the splanchnic may cause an irritation to be carried to the liver, leading to congestion, with possible resulting congestions in limbs, cord and brain. The irritation carried into the Vasomotor System, the mechanical pressure thrown upon the vessels, or the catch that hinders thoracic rhythm, may happen in any one of a thousand ways.

The Osteopath's work is to find which one of the thousand, and to act accordingly. The only therapeutist who performs the rational, and radical work **which corrects causes and which builds upon the right foundation of natural and perfect mechanical relations the superstructure of health that abounds in the natural body.** We must take knowledge where we find it, from books and from experience, and, **applying our own Osteopathic reasoning and methods of examination and treatment, work out the logical and desired result, the cure of disease.** For this the world has been waiting for centuries while her medical men have been lost in curious speculation. **Thus, Osteopathy is giving, to the world a Natural, reasonable and successful System of Medicine."** - Dr Hazzard, DO in "Osteopathic Manipulation of the Blood-Mass", JAOA, November 1904.

Anatomy and Physiology of the Vasomotor Paths and Centers

"This work owes its origin to the clinical experience I have had the opportunity to gather in recent years at Professor Oppenheim's outpatient clinic.

I repeatedly encountered clinical pictures whose classification presented unusual difficulties because they did not fully correspond to any of the previously known and defined diseases.

The symptoms of these patients mostly related to disturbances of sensitivity, Vasomotility, and the trophism of the culminating parts of the body.

Previously, similar clinical pictures and symptom groups have been summarized under the title: **"Vasomotor-Trophic Neuroses."**

These included:

1. Acroparesthesia (tingling, numbness, or burning sensations in the extremities, particularly the fingers and toes).
2. Nothnagel's Vasomotor Neurosis (feeling of formication in hands, and shooting pains in limbs).
3. Erythromelalgia (burning pain, redness, and heat, primarily in the feet and hands).
4. Raynaud's Disease (fingers and toes, feel numb and cold).
5. Circumscribed Transient Edema.

In addition to the disorders just mentioned, I have included several other, clinically related disorders, among which I particularly mention scleroderma, in my discussions, and have chosen the well-established term: “Vasomotor-Trophic Neuroses”.

Not in all of the clinical pictures mentioned do we find Vasomotor and Trophic symptoms combined, and in almost all of them, in addition to these symptoms, other symptoms, especially those of a sensory nature, are present.

Indeed, the latter are definitely prominent in acroparesthesias.

To express this, but the term “acropathies” is too broad and comprehensive; among other things, acromegaly and Morvan's Disease would definitely have to be included here.

All kinds of reservations also arise regarding the term “the acroneuroses”.

The clinical pictures that gave me the idea for my monographic presentation of this area had, as mentioned, the peculiarity that they could not be easily integrated into any of the previously strictly separate diseases of this group, while they unmistakably belonged to the group of vasomotor-trophic neuroses.

I have preceded the clinical section with a lengthy anatomical-physiological introduction on the Vasomotor and Secretory centers and pathways and on the dependence of tissue nutrition on alterations in the Nervous System.

The vasomotor-trophic neuroses represent an important part of the overall pathology of the sympathetic nervous system.

The increase in our knowledge of the nature and significance of the internal Secretion is unmistakable, and given the close relationships that exist everywhere between endocrine secretion and the autonomic nervous system, the effort to make pathological events in the realm of the sympathetic nervous system dependent on disturbances of endocrine secretion is easily understandable.

As can be seen most organs receive a dual autonomic innervation: on the one hand, from the sympathetic system in the narrower sense, and on the other, from the craniobulbar and sacral systems, the parasympathetic system. While all autonomic nerves, as already mentioned, exhibit a common pharmacological reaction, namely the nicotine reaction, there is a group of poisons that act only on the sympathetic and another that act only on the parasympathetic nerve endings.

Adrenaline always acts on organs in accordance with an irritation of the associated sympathetic fibers.

Accordingly, it causes vasoconstriction in the sympathetic fibers in all vascular regions; it causes an increase and acceleration of the heartbeat, such as by stimulating the accelerant; it causes pupil dilation, such as by stimulating the cervical sympathetic nerve; and it causes secretion of the salivary glands, insofar as these are activated by sympathetic nerves.

But where the sympathetic fibers exert an inhibitory effect, for example in the stomach and intestines or in the bladder, adrenaline also causes inhibition rather than excitation.

One can therefore say that the excitatory effect of adrenaline only affects those of the total endings of the vegetative system which belong to the sympathetic system in the narrower sense. But this rule has a single, admittedly very important exception: the sweat glands do not react to adrenaline with excitation.

On the other hand, adrenaline has no effect on the endings of the parasympathetic systems.

There is another group of poisons which find their point of attack precisely at the terminal apparatus of this system and which leaves the sympathetic nervous system unaffected with one exception, namely the sweat glands.

According to Gottlieb and Meyer, whom we have followed in their presentation of the pharmacological effects and peculiarities of these systems, the starting points of the 2 large groups of the sympathetic system, located in the central nervous system, also appear to be pharmacologically distinguishable from one another and characterized by their peculiar chemical reactions.

The Trophic (Feeding & Nutrition) Functions of the Nervous System

We must first answer the question of whether such an influence of the nervous system can be demonstrated at all.

Or, to formulate the question more precisely, we must ask ourselves:

Do Nutritional Disturbances occur in any tissue of the human body that we must consider to be directly dependent on specific disturbances in any part of the Peripheral or Central Nervous System?

There is undoubtedly, and this is immediately obvious, a large number of “nutritive or atrophic” disorders that develop completely independently of the nervous system.

This includes the entire large group of changes directly caused by the vascular system.

If, for example, the femoral artery is completely blocked by a clot, and thus no nutrients can be supplied to the leg, the leg must naturally perish.

This includes tissue changes caused by local external influences, the crushing of tissue by external trauma, and its destruction by burning or freezing.

This also includes the damage that Bacteria can cause to Tissue Nutrition, either directly or through the production of Toxins.

Dependence of Muscle Nutrition on the Nervous System

There has been no shortage of voices, especially in earlier times, who sought to attribute every nutritional disorder to one or another of the aforementioned conditions and to attribute a direct influence to it.

The absence of tenderness to pressure in the nerve trunks and muscles, the absence of muscular atrophy and changes in electrical excitability, as well as the striking change in symptoms reminiscent of neuralgia and the lack of progression.

The frequently observed hyperesthesia, and even more so the hypoesthesia, suggest a more serious anatomical lesion, but a definitive answer cannot yet be given.

Schultze, without insisting on this view, considers a possible affection of the connective tissue spindles (Renaut's corpuscles).

One could assume a direct effect of certain harmful agents (colds or poisons) on the cutaneous nerve endings and the smallest sensory nerve branches, with or without further spread of the disorder upwards.

The Vasomotor Innervation of the Extremities

If we now recall the etiological factors that favor the development of the symptom complex, we will generally agree with the view of those who seek the cause of the disease in changes in the final sensory and vasomotor endings.

Generally, it is not individual nerves that are affected, over a greater or lesser part of their course, but rather the peripheral endings of a large number of nerves.

We must nevertheless conclude one thing from the facts presented: that we have every reason to consider the condition of the Vasomotor Nervous System in cases of Vascular Disease.

If Stähelin seeks to derive reasons for this interpretation of the origin of Quincke's Disease (angioneurotic oedema affecting only the upper airway) from the successes of therapy, citing in particular those cases in which lasting success was achieved by avoiding the ingestion of Toxins or by consistent Emptying and Disinfection of the Intestines, this may also be valid for a number of cases.

Dependence of Glandular Activity on the Nervous System

The secretion of glandular secretion, should not be viewed as a simple consequence of altered vascular congestion, but rather as an independent function under the influence of specific nerves.

The Influence of Reflex Stimuli

Pathological irritations caused by an inflammatory state in the affected nerve region irritate the trophic center of the affected sensory fibers, i.e., the spinal ganglia, and cause a weakening of trophic activity there, which in turn is centrifugally transmitted to the periphery by the same sensory fibers.

It is of great interest that this theory introduces a new element: **the emergence of Trophic Disturbances Through Reflex Stimuli.**

Admittedly, Vulpian is not the first to express this view, as Weir-Mitehell also advocated a similar view.

Later, Hayem and Hallopeau et Neumann advocated this view.

Reflex-Dependent Factors in the Trophic Functions of the System

Stimuli in the Sensory Nerve Endings in the spinal ganglia trigger biological changes, which exert a trophic influence on the fibers emanating from the ganglion cells." - Dr Richard Cassirer, MD in "Die Vasomotorisch-Trophischen Neurosen eine Monographie", 1912.

The Fundamental Aim of Osteopathy is to Normalize the Mechanism of the Body

"It takes years of Study and Practice to produce an efficient and competent Osteopath. The successful Osteopath will run his hands down the spine of his patient, even over garments, and will clearly visualize, by virtue of the tactile sense, the relative position of the various vertebræ and the articulation of the ribs. He is then able to diagnose practically any abnormal alignment of structure and to determine its effects upon the venous and lymphatic drainage or the arterial supply of pure blood. He can also accurately determine the absolute pressure on important structures and, in all, quite intelligently ascertain to what extent any segment of the spinal cord may be below normal in its possibilities of disseminating the vital or recuperative force.

It naturally follows that a reduced or altered nerve force to any organ must interfere with the normal activity and function of that organ, and hence reduce its possibility of resisting disease. Reduced or altered nerve force to any organ, may be likened to reduced electrical current to a motor or to an electric lamp.

Just as the electric lamp will be lessened in its brilliancy, and the motor in its power to do work, similarly the various organs of the body will be restricted in their power to function normally, to resist disease, and to maintain a high degree of health and potentiality.

The Art of Structural Adjustment, as scientifically applied by the competent Osteopath, is the most effective method of producing the highest recuperative power which is possible in any individual the recuperative power inherent in any individual establishes immunity and gradually overcomes disease.

All systems of therapy strive to achieve this end.

The Fundamental Aim of Osteopathy is to Normalize Structure, and thereby normalize important nerve centres in both the central nervous system and the sympathetic or autonomic nervous system. Normal body function is the result of a free and autonomic transmission of nerve impulses, or vital energy, to and from all parts of the body. The free and normal circulation of the blood and other fluids is only possible when the various nerve centres are not restricted or altered in their function through the irritation of pressure and poison.

The Vasomotor nerves, which supply the circular muscles in the blood vessel walls, will automatically distribute and control the circulation of all fluids if structure is normal.

Thus, Osteopaths realize how, and why any peripheral or terminal irritation can cause ill-health.

Pressure and Poison

Pressure in the sense of the osteopathic lesion; and Poison as the natural result of reduced recuperative power, disturbed function, insufficient resistance to disease, and general incorrect living.

For instance, reduced nerve force to the stomach and bowel lowers the functioning power of those organs, and hence permits the manufacture of abnormal compounds, retention of poisonous matter, and subsequently, through absorption, an altered chemical character of the blood and other fluids.

This means general mal-nutrition, or, as some have said:

"The individual body cell is bathed in poison."

Effective treatment must break into this vicious cycle, and the first essential is to correct all structural abnormalities.

Pressure and Poison: are the 2 great factors in the cause of disease, and the removal of pressure is the initial step in the removal of poison.

The highest degree of immunity against pathogenic bacteria and the various infections which are constantly operating is found in perfect structural adjustment and the fortification of pure blood.

Osteopathic research has proved the effect of stresses and strains on joint structure and the surrounding tissues, also to what extent a one-sided or unbalanced use of the body can produce permanent structural derangement and hence restrict the possibilities of normal function.

Incorrect posture, is responsible for many structural derangements, which predispose the body to ill-health and reduced potentiality.

Osteopathy has always been serviceable in Nervous Diseases.

Lateral spinal curvature and round shoulders are best treated by Osteopathy, which endeavours to re-establish the integrity, as far as possible, of all the distorted joints.

Osteopathic Colleges recognize the importance of the various branches of surgery; to some extent restricted in range by the success of Osteopathic adjustment.

Much time and Study are given to the consideration of the various systems of Diet, Hydrotherapy in its various applications is thoroughly taught.

Osteopathic Colleges cover the field of Physical Training and Massage, both of which are quite distinct from Osteopathy.

The great epidemic which swept America in 1918 afforded a startling proof of the superiority of Osteopathic Treatment.

This epidemic was one of the worst ever known.

Records show that over 100,000 cases came under the personal attention of Osteopathic Practitioners.

Dr E. R. Booth, DO, in "The History of Osteopathy", states:

"Over 7.5 Million of deaths from casualties occurred as a result of a little over 4 years of the world war, and over 10 millions as a result of the Influenza and Pneumonia in a little over 4 months.

About 500,000 of the deaths from the Flu-Pneumonia Epidemic were in the United States.

The MD's (Medical Trade) lost on an average between 5% and 6% of their "Flu" patients: in Boston alone, 27%; in Chicago, 14.5%; in New York City, 9.8%.

They lost, on an average, about 33% of their Pneumonia cases: in Chicago, 26%; in New York, 64%.

Osteopaths lost, on an average, less than 0.5% of their "Flu" patients.

Very few of their cases ran into Pneumonia, and they lost less than 10% of them. The facts cited relate to the civil population, where most of the victims had, at least, some opportunity of selecting the practitioners of their choice.

But not so in the Army, where the Influenza and Pneumonia were more fatal.

Its Medical Corps was under the control of Allopathic Officials (Medical Trade). At its head was the Surgeon-General, an MD, and an office made up entirely of MD's. There was a Medical Department of the Council of National Defense, composed of ex-presidents or other officials of the American Medical Association. Osteopathic Physicians were ruled out of the camps, and the soldiers who secured the aid of Osteopathy clandestinely were often deprived of it as soon as the Medical Authorities found out what was being done.

The more than 500 licensed Osteopathic Physicians in the Army and Navy were not allowed to lend a helping hand when our boys were literally dying by the thousands under Medical Treatment.

Who was responsible for most of those deaths?

In the great epidemic of Infantile Paralysis, the Osteopathic profession had very similar comparative percentage results to those obtained in the Influenza epidemic." - in "Osteopathy and its National Importance", The Empire Review, April 1925

The Influence of Anaesthetics on the Vasomotor Centres

"As far as regards their power to produce insensibility to pain, anaesthetics may be regarded as antagonizing the effects of irritation of sensitive nerves.

It is interesting, therefore, to inquire how far this antagonism extends to other effects of the same irritation.

One of the most constant physiological results of irritation of a sensitive nerve is a rise of arterial blood tension, due to a reflex stimulation, through the Vasomotor centres of the muscular walls of the smaller arteries, especially those of the intestines.

Now when the intensity of any reflex phenomenon is affected by the action of a drug, or any other external agency, this may take place in 3 different ways, viz.: through a change of irritability, either of the afferent or of the efferent nerves involved, or of the nervous centres through which the action takes place.

Now it was shown by Nawalichin that compression of the two carotid arteries causes a great increase of blood-tension, due to an irritation of the Vasomotor centres, produced by the diminished supply of blood sent to them.

In other words, the Vasomotor Nerves had, under chloroform, preserved completely their normal functions."- in "The influence of Anaesthetics on the Vaso-Motor Centres", 1874.

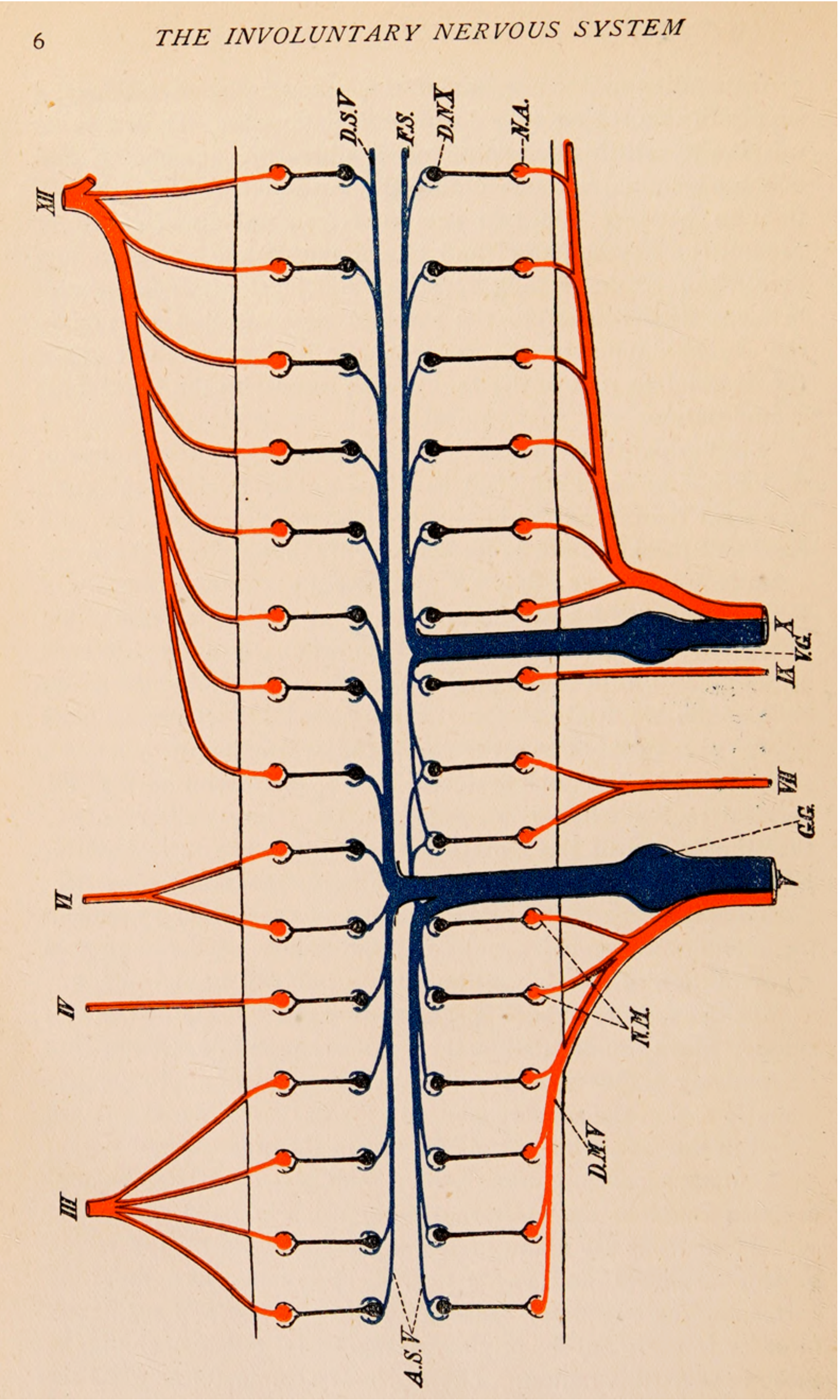
"The 3 most important points that the consideration of the sympathetic seems to me to illustrate, are:

1. The marvellous effect of reflex action in health and disease in connection with this system.

2. The exquisite mutual dependence of the various portions of the nervous system (cerebral, spinal, and sympathetic) on each other.

3. The fact that, in spite of this mutual dependence, the sympathetic, under conditions of lesion of brain or cord, is enabled within certain limits to act independently." - in "The Influence of the Sympathetic on Disease", 1885.

> ***"The cranial and sacral systems [that] supply the muscular coats of the alimentary canal, and certain structures connected developmentally with anterior and posterior portions of it. They are especially connected with these terminal portions; they send numerous nerve fibers to them, whereas they send but few to the intervening portion."***
> *- J. N. Langley in "Presidential address, Physiological section. Report of the Meetings of the British Association for the Advancement of Science, including its proceedings, recommendations and transactions", 1899.*


6
THE INVOLUNTARY NERVOUS SYSTEM
XII
D.S.V
F.S.
D.N.X
N.A.
X
V.G.
IX
VII
G.G.
V
VI
IV
III
N.M.
D.M.V.
A.S.V.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.

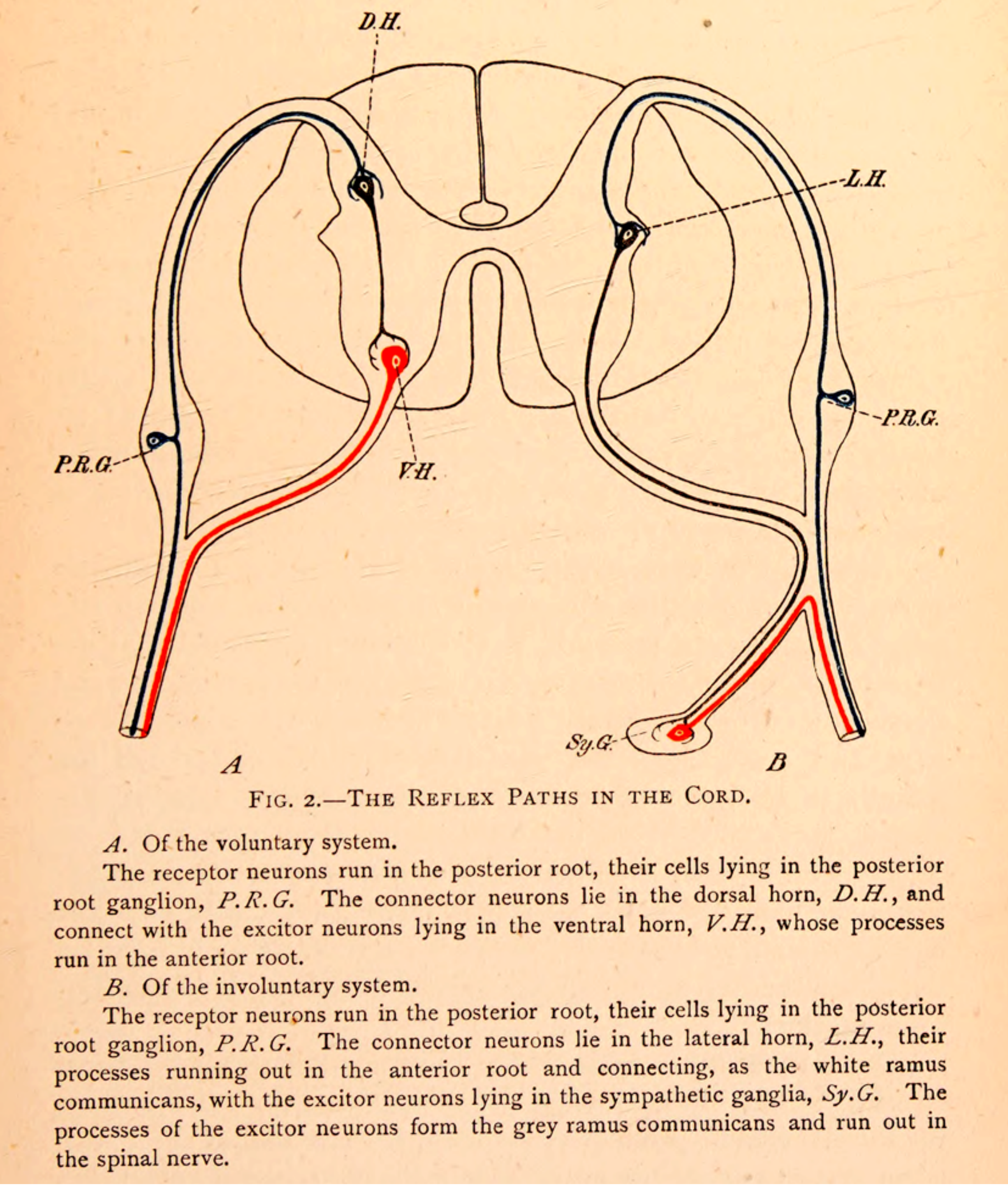


FIG. 2.—THE REFLEX PATHS IN THE CORD.

A. Of the voluntary system.

The receptor neurons run in the posterior root, their cells lying in the posterior root ganglion, *P.R.G.* The connector neurons lie in the dorsal horn, *D.H.*, and connect with the excitor neurons lying in the ventral horn, *V.H.*, whose processes run in the anterior root.

B. Of the involuntary system.

The receptor neurons run in the posterior root, their cells lying in the posterior root ganglion, *P.R.G.* The connector neurons lie in the lateral horn, *L.H.*, their processes running out in the anterior root and connecting, as the white ramus communicans, with the excitor neurons lying in the sympathetic ganglia, *Sy.G.* The processes of the excitor neurons form the grey ramus communicans and run out in the spinal nerve.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.

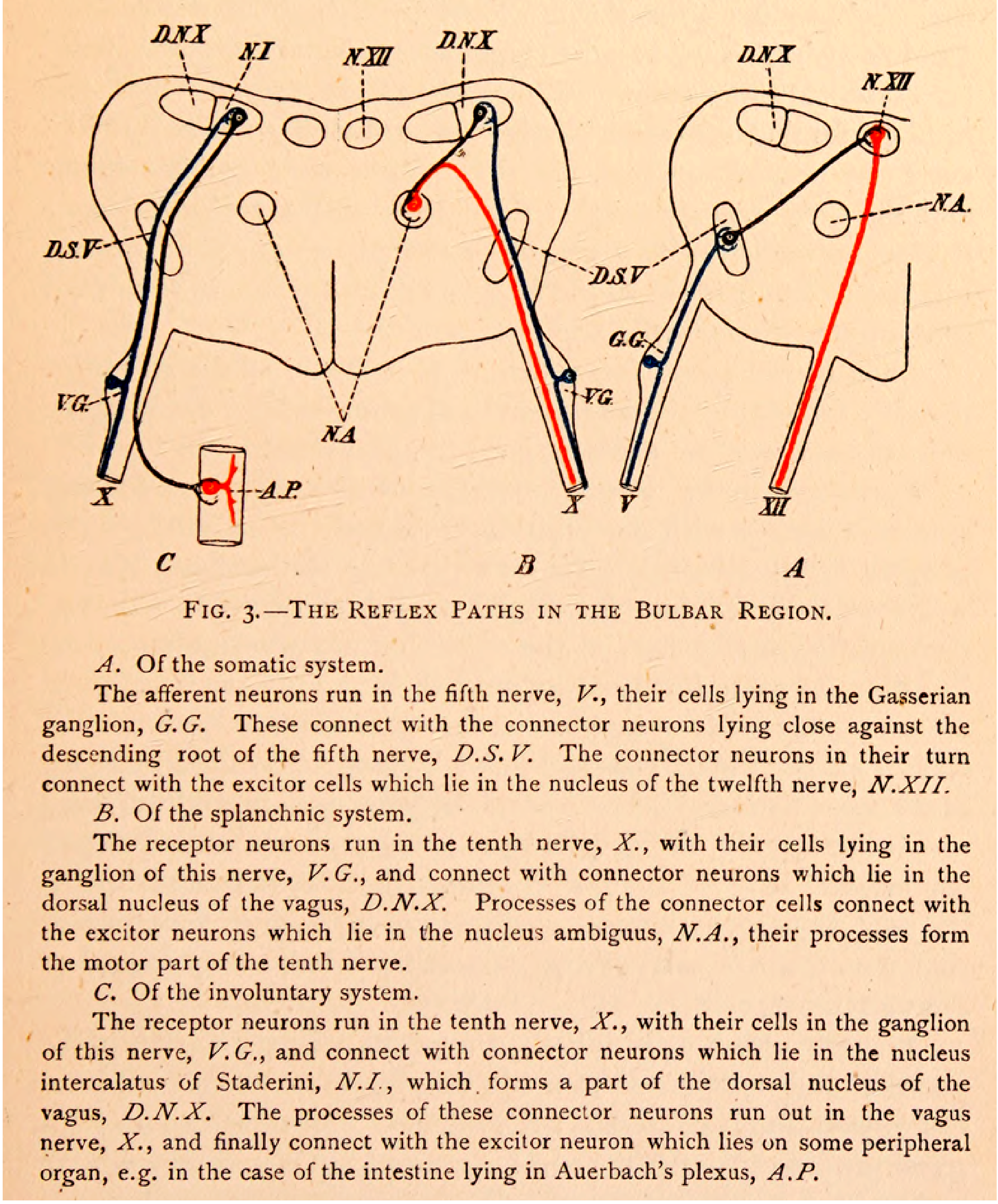


FIG. 3.—THE REFLEX PATHS IN THE BULBAR REGION.

A. Of the somatic system.

The afferent neurons run in the fifth nerve, *V.*, their cells lying in the Gasserian ganglion, *G.G.* These connect with the connector neurons lying close against the descending root of the fifth nerve, *D.S.V.* The connector neurons in their turn connect with the excitor cells which lie in the nucleus of the twelfth nerve, *N.XII.*

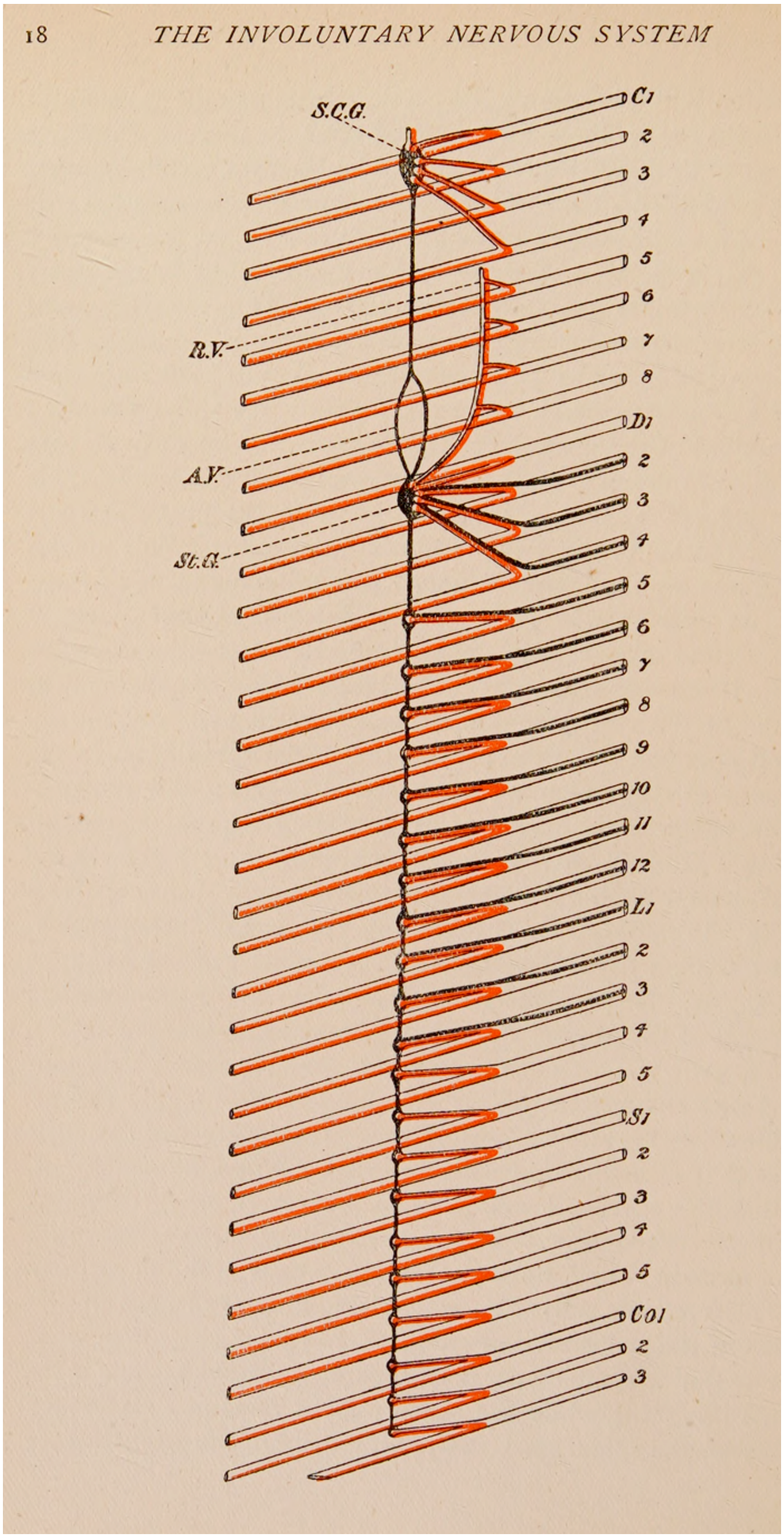
B. Of the splanchnic system.

The receptor neurons run in the tenth nerve, *X.*, with their cells lying in the ganglion of this nerve, *V.G.*, and connect with connector neurons which lie in the dorsal nucleus of the vagus, *D.N.X.* Processes of the connector cells connect with the excitor neurons which lie in the nucleus ambiguus, *N.A.*, their processes form the motor part of the tenth nerve.

C. Of the involuntary system.

The receptor neurons run in the tenth nerve, *X.*, with their cells in the ganglion of this nerve, *V.G.*, and connect with connector neurons which lie in the nucleus intercalatus of Staderini, *N.I.*, which forms a part of the dorsal nucleus of the vagus, *D.N.X.* The processes of these connector neurons run out in the vagus nerve, *X.*, and finally connect with the excitor neuron which lies on some peripheral organ, e.g. in the case of the intestine lying in Auerbach's plexus, *A.P.*

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.


18
THE INVOLUNTARY NERVOUS SYSTEM
S.C.G.
R.V.
A.V.
St.G.
C1
2
3
4
5
6
7
8
D1
2
3
4
5
6
7
8
9
10
11
12
L1
2
3
4
5
S1
2
3
4
5
Co1
2
3

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.

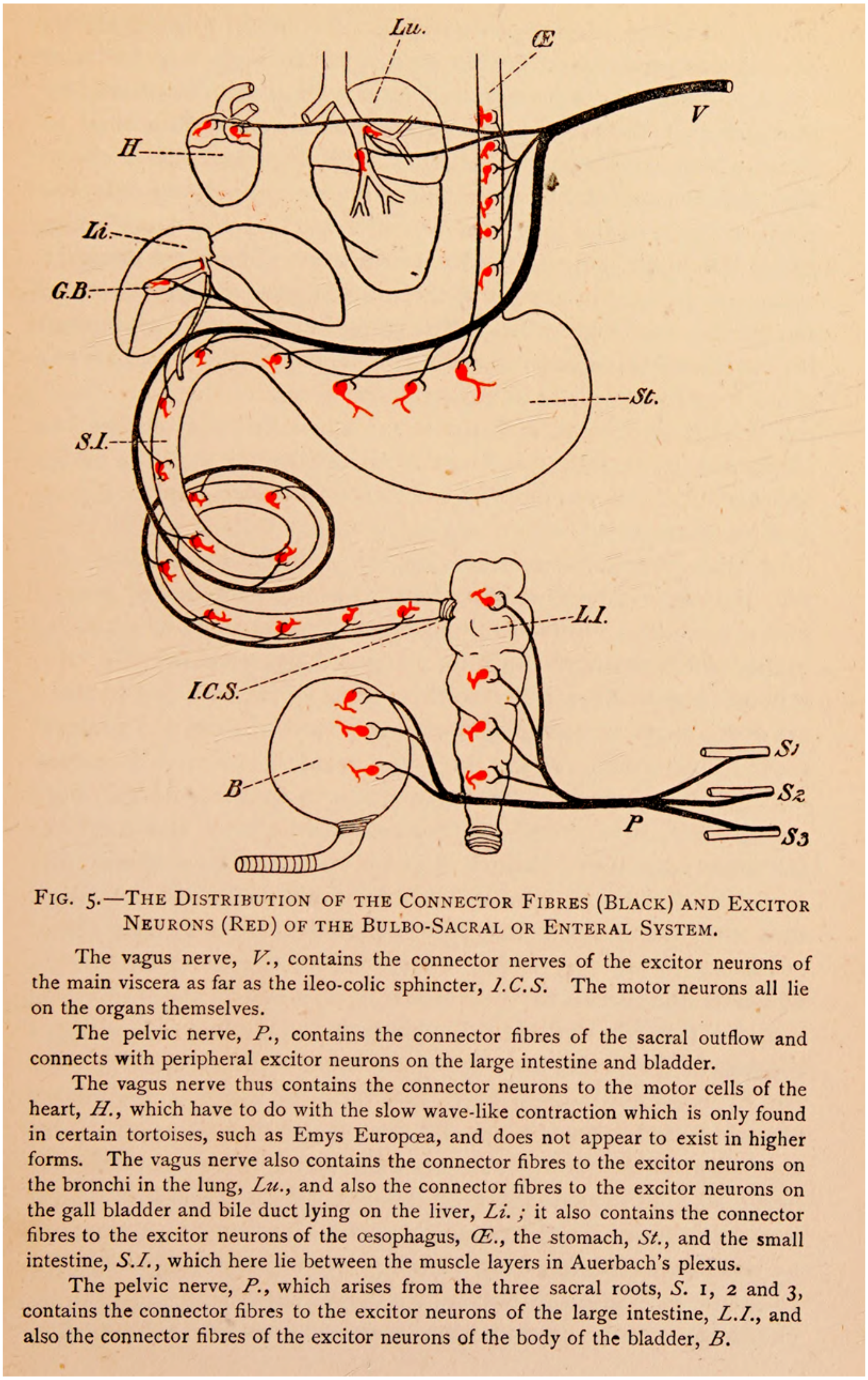


Fig. 5.—The Distribution of the Connector Fibres (Black) and Excitor Neurons (Red) of the Bulbo-Sacral or Enteral System.

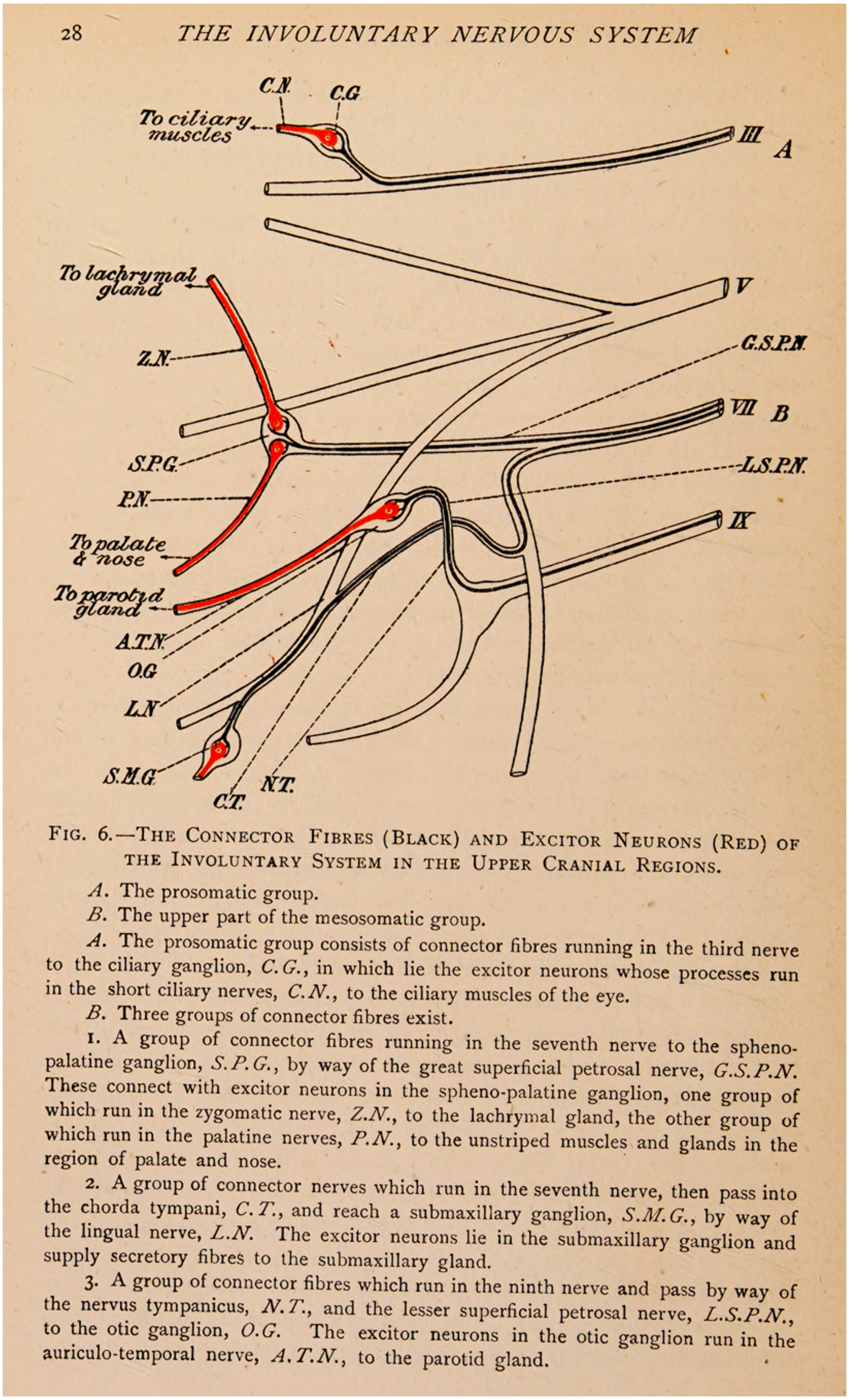
The vagus nerve, *V.*, contains the connector nerves of the excitor neurons of the main viscera as far as the ileo-colic sphincter, *I.C.S.* The motor neurons all lie on the organs themselves.

The pelvic nerve, *P.*, contains the connector fibres of the sacral outflow and connects with peripheral excitor neurons on the large intestine and bladder.

The vagus nerve thus contains the connector neurons to the motor cells of the heart, *H.*, which have to do with the slow wave-like contraction which is only found in certain tortoises, such as Emys Europœa, and does not appear to exist in higher forms. The vagus nerve also contains the connector fibres to the excitor neurons on the bronchi in the lung, *Lu.*, and also the connector fibres to the excitor neurons on the gall bladder and bile duct lying on the liver, *Li.*; it also contains the connector fibres to the excitor neurons of the œsophagus, *Œ.*, the stomach, *St.*, and the small intestine, *S.I.*, which here lie between the muscle layers in Auerbach's plexus.

The pelvic nerve, *P.*, which arises from the three sacral roots, *S.* 1, 2 and 3, contains the connector fibres to the excitor neurons of the large intestine, *L.I.*, and also the connector fibres of the excitor neurons of the body of the bladder, *B.*

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.



28 THE INVOLUNTARY NERVOUS SYSTEM

C.N.
C.G.
To ciliary muscles
III
A
To lachrymal gland
V
G.S.P.N.
Z.N.
VII
B
S.P.G.
L.S.P.N.
P.N.
To palate & nose
IX
To parotid gland
A.T.N.
O.G.
L.N.
S.M.G.
C.T.
N.T.

Fig. 6.—The Connector Fibres (Black) and Excitor Neurons (Red) of the Involuntary System in the Upper Cranial Regions.

A. The prosomatic group.

B. The upper part of the mesosomatic group.

A. The prosomatic group consists of connector fibres running in the third nerve to the ciliary ganglion, *C.G.*, in which lie the excitor neurons whose processes run in the short ciliary nerves, *C.N.*, to the ciliary muscles of the eye.

B. Three groups of connector fibres exist.

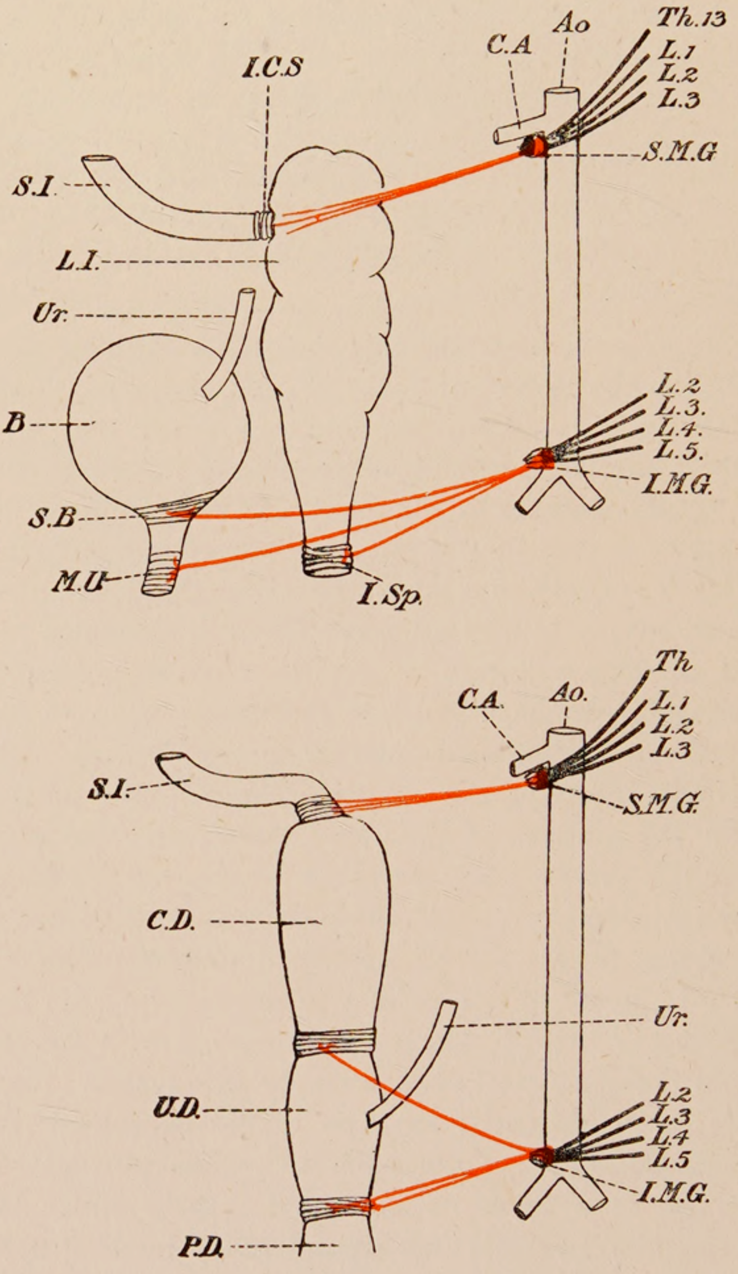
1. A group of connector fibres running in the seventh nerve to the spheno-palatine ganglion, *S.P.G.*, by way of the great superficial petrosal nerve, *G.S.P.N.* These connect with excitor neurons in the spheno-palatine ganglion, one group of which run in the zygomatic nerve, *Z.N.*, to the lachrymal gland, the other group of which run in the palatine nerves, *P.N.*, to the unstriped muscles and glands in the region of palate and nose.

2. A group of connector nerves which run in the seventh nerve, then pass into the chorda tympani, *C.T.*, and reach a submaxillary ganglion, *S.M.G.*, by way of the lingual nerve, *L.N.* The excitor neurons lie in the submaxillary ganglion and supply secretory fibres to the submaxillary gland.

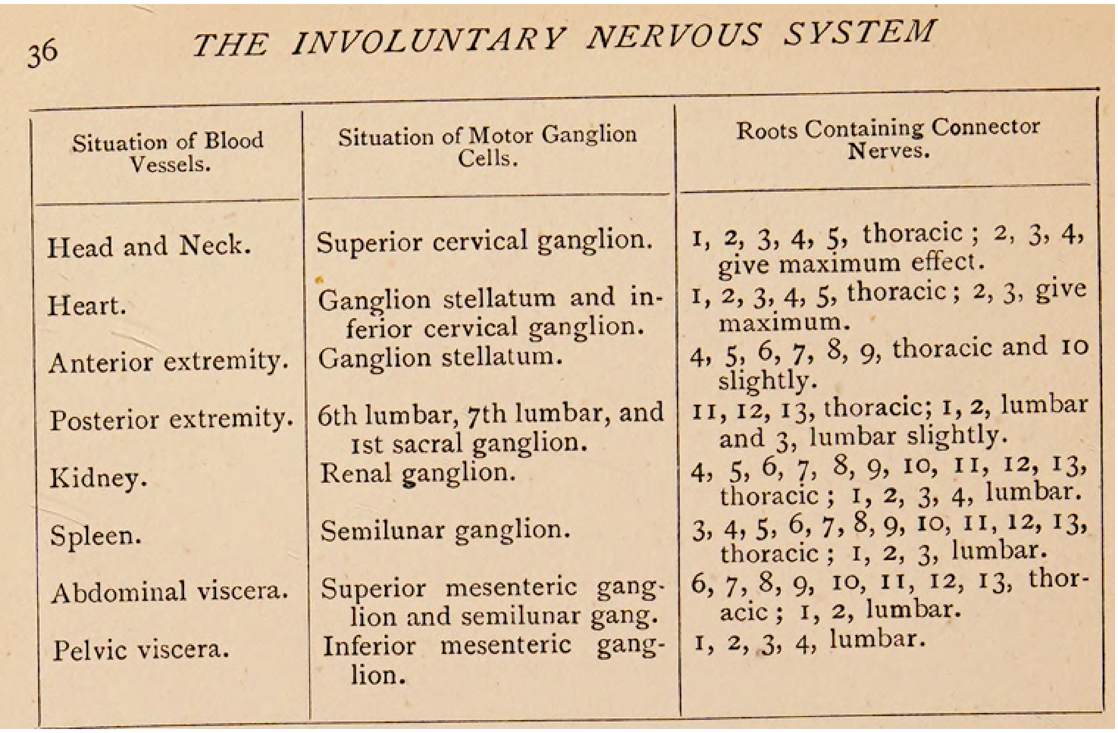
3. A group of connector fibres which run in the ninth nerve and pass by way of the nervus tympanicus, *N.T.*, and the lesser superficial petrosal nerve, *L.S.P.N.*, to the otic ganglion, *O.G.* The excitor neurons in the otic ganglion run in the auriculo-temporal nerve, *A.T.N.*, to the parotid gland.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.

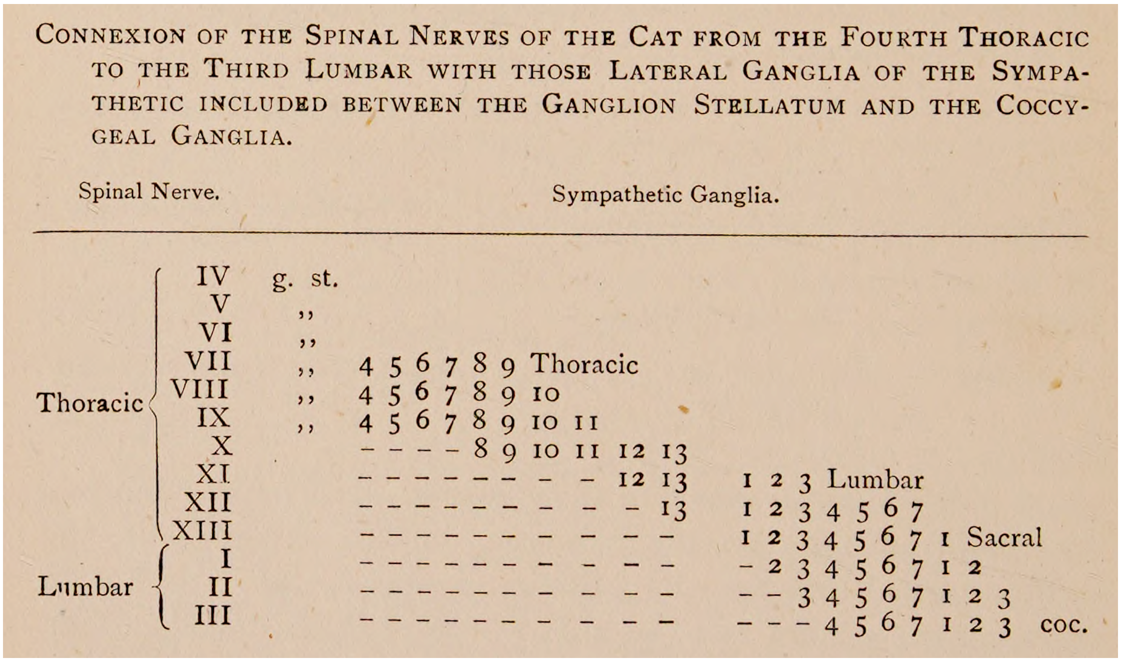
THE INVOLUNTARY NERVOUS SYSTEM


I.C.S
C.A
Ao
Th.13
L.1
L.2
L.3
S.M.G
S.I.
L.I.
Ur.
B
L.2
L.3.
L.4.
L.5.
I.M.G.
S.B
M.U
I.Sp.
Th
C.A.
Ao.
L.1
L.2
L.3
S.I.
S.M.G.
C.D.
Ur.
U.D.
L.2
L.3
L.4
L.5
I.M.G.
P.D.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.



Situation of Blood Vessels.	Situation of Motor Ganglion Cells.	Roots Containing Connector Nerves.
Head and Neck.	Superior cervical ganglion.	1, 2, 3, 4, 5, thoracic; 2, 3, 4, give maximum effect.
Heart.	Ganglion stellatum and inferior cervical ganglion.	1, 2, 3, 4, 5, thoracic; 2, 3, give maximum.
Anterior extremity.	Ganglion stellatum.	4, 5, 6, 7, 8, 9, thoracic and 10 slightly.
Posterior extremity.	6th lumbar, 7th lumbar, and 1st sacral ganglion.	11, 12, 13, thoracic; 1, 2, lumbar and 3, lumbar slightly.
Kidney.	Renal ganglion.	4, 5, 6, 7, 8, 9, 10, 11, 12, 13, thoracic; 1, 2, 3, 4, lumbar.
Spleen.	Semilunar ganglion.	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, thoracic; 1, 2, 3, lumbar.
Abdominal viscera.	Superior mesenteric ganglion and semilunar gang.	6, 7, 8, 9, 10, 11, 12, 13, thoracic; 1, 2, lumbar.
Pelvic viscera.	Inferior mesenteric ganglion.	1, 2, 3, 4, lumbar.



CONNEXION OF THE SPINAL NERVES OF THE CAT FROM THE FOURTH THORACIC TO THE THIRD LUMBAR WITH THOSE LATERAL GANGLIA OF THE SYMPATHETIC INCLUDED BETWEEN THE GANGLION STELLATUM AND THE COCCYGEAL GANGLIA.

	Spinal Nerve.	Sympathetic Ganglia.
Thoracic	IV	g. st.
	V	,,
	VI	,,
	VII	,, 4 5 6 7 8 9 Thoracic
	VIII	,, 4 5 6 7 8 9 10
	IX	,, 4 5 6 7 8 9 10 11
	X	– – – – 8 9 10 11 12 13
	XI	– – – – – – – – 12 13 1 2 3 Lumbar
	XII	– – – – – – – – – 13 1 2 3 4 5 6 7
	XIII	– – – – – – – – – – 1 2 3 4 5 6 7 1 Sacral
Lumbar	I	– – – – – – – – – – – 2 3 4 5 6 7 1 2
	II	– – – – – – – – – – – – 3 4 5 6 7 1 2 3
	III	– – – – – – – – – – – – – 4 5 6 7 1 2 3 coc.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.

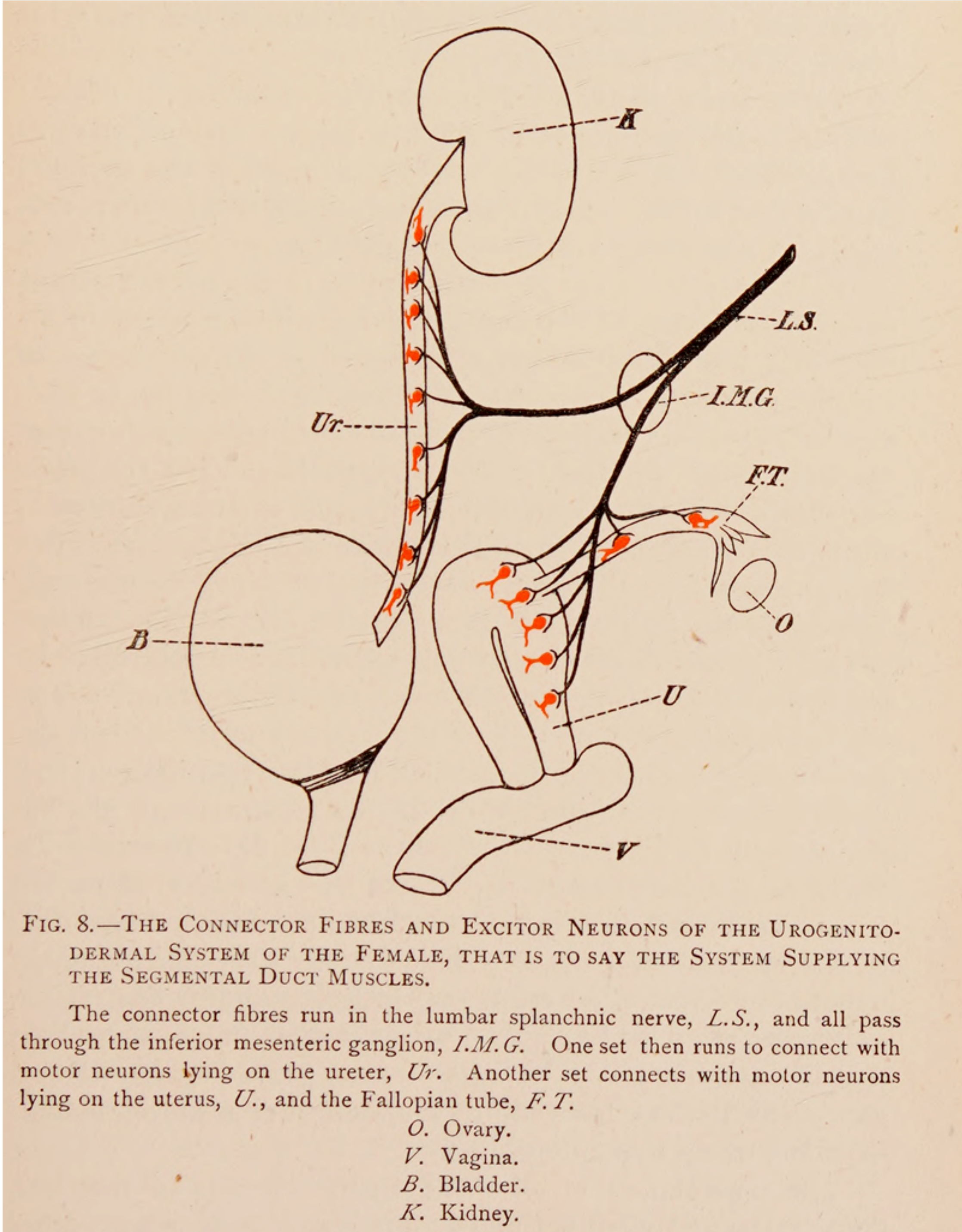
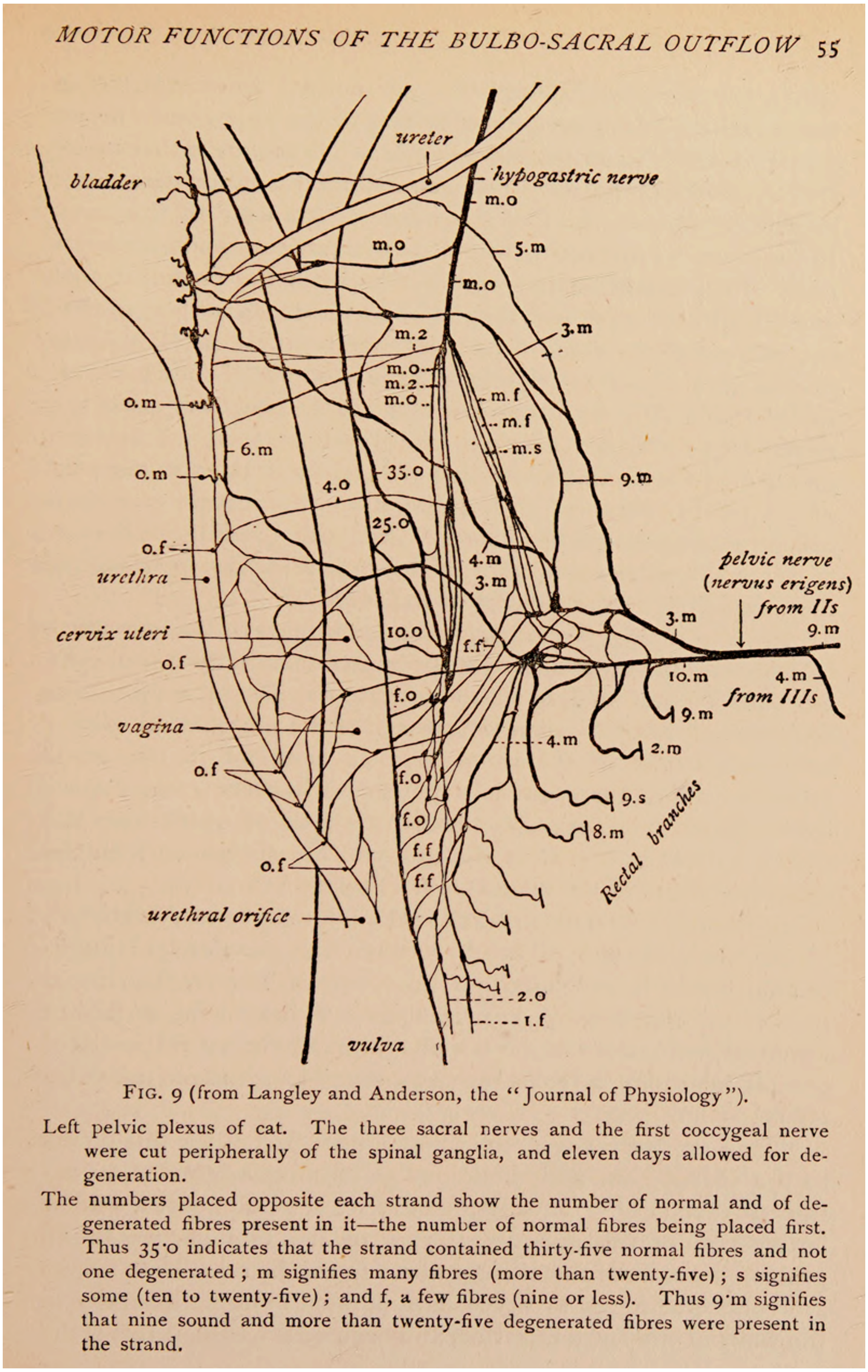


Fig. 8.—The Connector Fibres and Excitor Neurons of the Urogenitodermal System of the Female, that is to say the System Supplying the Segmental Duct Muscles.

The connector fibres run in the lumbar splanchnic nerve, *L.S.*, and all pass through the inferior mesenteric ganglion, *I.M.G.* One set then runs to connect with motor neurons lying on the ureter, *Ur.* Another set connects with motor neurons lying on the uterus, *U.*, and the Fallopian tube, *F. T.*

O. Ovary.
V. Vagina.
B. Bladder.
K. Kidney.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.



MOTOR FUNCTIONS OF THE BULBO-SACRAL OUTFLOW 55

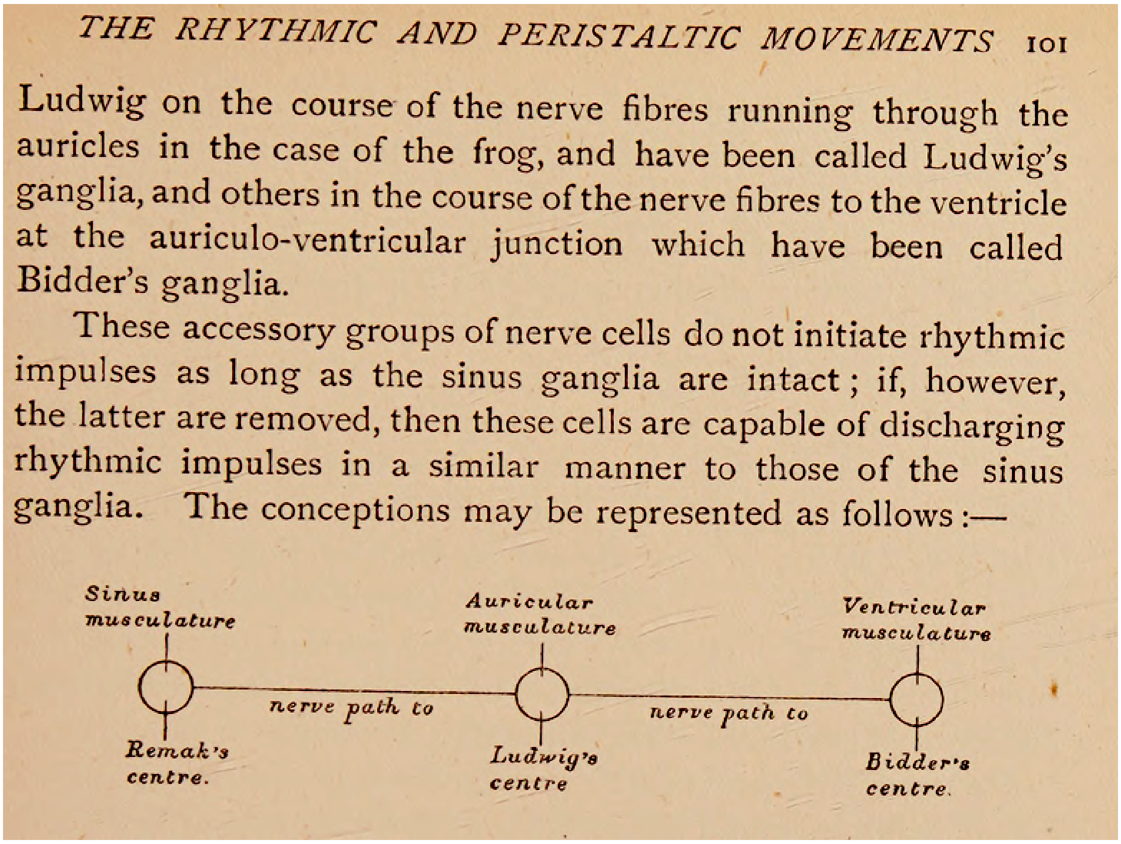
ureter
bladder
hypogastric nerve
m.o
m.o
5.m
m.o
m.2
3.m
m.o
m.2
m.o
m.f
m.f
m.s
o.m
6.m
o.m
35.o
4.o
9.m
25.o
o.f
4.m
urethra
3.m
pelvic nerve
(nervus erigens)
from IIs
3.m
cervix uteri
10.o
9.m
o.f
f.f
10.m
4.m
from IIIs
f.o
9.m
vagina
4.m
2.m
o.f
f.o
9.s
f.o
8.m
Rectal branches
f.f
o.f
f.f
urethral orifice
2.o
1.f
vulva

FIG. 9 (from Langley and Anderson, the "Journal of Physiology").

Left pelvic plexus of cat. The three sacral nerves and the first coccygeal nerve were cut peripherally of the spinal ganglia, and eleven days allowed for degeneration.

The numbers placed opposite each strand show the number of normal and of degenerated fibres present in it—the number of normal fibres being placed first. Thus 35·0 indicates that the strand contained thirty-five normal fibres and not one degenerated; m signifies many fibres (more than twenty-five); s signifies some (ten to twenty-five); and f, a few fibres (nine or less). Thus 9·m signifies that nine sound and more than twenty-five degenerated fibres were present in the strand.

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.



THE RHYTHMIC AND PERISTALTIC MOVEMENTS 101

Ludwig on the course of the nerve fibres running through the auricles in the case of the frog, and have been called Ludwig's ganglia, and others in the course of the nerve fibres to the ventricle at the auriculo-ventricular junction which have been called Bidder's ganglia.

These accessory groups of nerve cells do not initiate rhythmic impulses as long as the sinus ganglia are intact; if, however, the latter are removed, then these cells are capable of discharging rhythmic impulses in a similar manner to those of the sinus ganglia. The conceptions may be represented as follows:—

Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916.

Vaso-Constrictor Nerve-Fibres

"Gaskell's work on the Nervous System: "The Involuntary Nervous System", 1916, played a significant role in the development of our understanding of Vasomotor Function. His Anatomical Studies of the Nervous System helped to clarify the organization of the autonomic nervous system, including its role in regulating blood vessel constriction and dilation (Vasomotor Control). Specifically, his work differentiated between the sympathetic and parasympathetic nervous systems and their respective roles in controlling blood flow.

As Gaskell (1885) showed, the origin of these nerves from the central nervous system is entirely confined to the white rami forming the sympathetic system.

This area extends from the 1st or 2nd thoracic to the 4th or 5th lumbar segments inclusive.

Vaso-constrictor nerve-fibres are contained in all the white rami. It is remarkable that these fibres are distributed to all parts of the body, not only to the thoracic and upper lumbar regions, but to the head and to the hind-limbs.

The evidence for the statement that there are no vasoconstrictors other than those of sympathetic origin is intimately connected with the action of adrenaline, a compound produced by the activity of the supra-renal bodies.

It may suffice to mention here that, the suprarenals are developed in intimate relationship with the sympathetic system, and that wherever there is known to be a supply of sympathetic nerve fibres to any organ, it is found that adrenaline produces the same effects as stimulation of the sympathetic nerves, as pointed out by Langley (1901).

Stomach and Intestine

Fibres to the cardiac end of the stomach are given off from the 5th to the 9th thoracic segments (Langley, 1903).

The small intestine receives fibres from the 5th thoracic to the 3rd lumbar, occasionally from the 4th lumbar (Fr. Franck and Hallion, 1896; Bunch, 1898 as regards visceromotor fibres).

The Pancreas

6th thoracic to 1st lumbar (Franck and Hallion, 1897).

The Spleen

3rd thoracic to 1st lumbar (chiefly from the 5th to the 10th thoracic (Bulgak, 1877; Schafer and Moore, 1896).

The Liver

The branches of the portal vein in the liver are supplied from the 3rd thoracic to the 11th thoracic, chiefly from the 5th to the 9th thoracic (Bayliss and Starling, 1894; Edmunds, 1915).

Suppose that the lateral pressure in the portal vein is being measured and that a particular spinal nerve, which contains constrictor fibres to the intestine, is stimulated.

The Lungs

According to Bradford and Dean (1894), the lungs are supplied with vaso-constrictors from the 3rd, 4th and 5th thoracic roots inclusive, a few are contained in the 6th and 7th.

Pelvic Organs

The innervation was worked out in detail by Langley and Anderson.

The large intestine receives vaso-constrictors through the inferior mesenteric ganglion from the 3rd and 4th lumbar roots.

The Uterus

From the 2nd to the 4th lumbar (Langley and Anderson, 1895.)

The external genital organs — 13th thoracic to 4th lumbar.

The Limbs

The fore-limbs — from the 3rd thoracic to the 11th thoracic.

The hind-limbs — from the 11th thoracic to the 3rd lumbar, all inclusive (Langley, 1891; Bayliss and Bradford, 1894).

The Trunk

The organs of the head and neck receive constrictors from the 2nd to the 5th thoracic segments inclusive.

The Heart

The blood supply of this organ is automatically varied in correspondence with its needs as the aortic pressure determines the flow through the coronary arteries.

The Voluntary Muscles

So far as voluntary muscle receives any vaso-constrictor innervation, it will be found to follow that of the part of the body to which the muscle belongs, in accordance with the preceding list.

Gaskell states (1916) that section of the abdominal sympathetic causes a great increase in the blood flow through the quadriceps extensor group of muscles, owing to the cutting off of constrictor impulses from the nerve centres.

Vaso-Motor Reflexes

The fact that Reflexes to Vaso-Motor Nerves are readily evoked by stimulation of various afferent nerves, and that these may be either of the nature of Vaso-dilatation or Vaso-constriction, was referred to incidentally in speaking of afferent nerves from blood vessels.

Since the former show themselves in a fall of arterial pressure, they are often called “depressor” reflexes; the latter, associated with a rise in arterial pressure, are then known as “pressor” reflexes.

There must be, accordingly, some region or regions in the central nervous system serving as centres for these reflexes.

The control by the central nervous system of the state of contraction of the arterioles may be said to serve two main purposes.

A generalized vaso-constriction raises the aortic pressure and affords a better supply of blood to organs whose arterioles are not narrowed, because they are poorly, or not at all, supplied with vaso-constrictor nerves, such as the coronary vessels of the heart and the vessels of the brain.

The failure of constriction in a given part may also be on account of a dilatation due to a coordinated (Loven) reflex.

It may be said that the heart and the brain are of such supreme importance and so sensitive to deficient supply of blood that the rest of the body has to be subservient to them, since it must be remembered that, although vaso-constriction raises the feeding pressure to an organ whose vessels are constricted, the net result is usually a decrease of supply to that organ itself.

The raised pressure is more than counterbalanced by the constriction of the channels. Even a small degree of narrowing has a marked effect on the flow.

It appears that vaso-constriction is produced by a fall in the pressure in the cerebral arteries and dilatation by a rise.

The changes to which the centres are sensitive may be either the pressure itself or of a chemical nature, as by variation in Oxygen supply." - in "The Vaso-Motor System", 1923.

Vasomotor Reflexes

"Cooling the nerve tends to produce vaso-dilator effects.

Stimulation of the skin, kneading of muscle, and manipulation of the intestines, all cause a fall of blood pressure, under certain conditions, and a rise under other conditions.

These conditions we believe, are the same as for the corresponding results with the sciatic nerve.

Whether a rise or fall of blood pressure will result from stimulation of an afferent nerve (terminals or cut central end), depends on the relative effects of the 3 primary causal factors:

a. Reflex Vasodilation;
b. Reflex Vaso-constriction,
c. Frequency and depth of respiration, and the relative predominance of 1 or more of these factors is determined by:

1. Strength of stimulus.
2. Temperature of the nerve.
3. Anaesthetic.
4. Degree of anaesthesia.
5. Idiosyncrasy of the animal.

Part of the expenses of this investigation has been defrayed, by a grant made by the Ductless Glands Committee of the British Association for the Advancement of Science." - in "Some Observations on Vaso-Motor Reflexes", Transactions of the Royal Society of Canada, 1914.

The Vasomotor in Melancholia

"The most common of all the Visceral Delusions is that which is referable to the Heart, known as the delusion of praecordial fear.

It is especially common in agitated melancholia, and its onset is sometimes significant of an impending paroxysm of melancholic frenzy.

As a rule, no organic heart lesion is present, but cardiac action is invariably much disturbed functionally in these cases, and sometimes organically.

The physical symptoms which are most conspicuous in melancholia are referable chiefly to the digestive organs or tract, consisting essentially of an atony or torpor of function.

As a rule, the Physical Disturbance Precedes the Mental.

The Appetite becomes impaired or lost, the Tongue Coated, the Breath Offensive, and the Bowels Constipated.

The patient loses flesh and energy, acquiring an increasing indisposition for muscular effort or exertion.

There is a feeling of physical weariness, and fatigue follows quickly any physical exercise. The skin takes on a pale, sallow, or muddy appearance, becomes dry and rough, or bathed in cold, clammy sweat.

The peripheral circulation is poor; the hands and feet are nearly always cold and often oedematous, especially the lower extremities.

Certain Vasomotor Disturbances are frequently present in the agitated melancholias and in alcoholic cases, and in women in whom the affection develops at the climacteric.

These disturbances consist of alternate pallor and flushings, with or without slight vertigo.

There is a peculiar pulse rate often observed in the stuporous and in the agitated cases which is probably of Vasomotor origin, occurring perhaps through the medium of some Toxaemic State acting upon the Vagus Nuclei.

When the period of convalescence sets in and the reaction occurs after the violence, stimulating tonics are of great service.

This latter remedy is of great service during the period of convalescence, when the circulation becomes rather depressed, the extremities cold, the skin greasy and turgid, with the finger-tips, lips, and ears of a purplish tint, showing Venous Stasis. **In this stage the use of Hot Baths (Hydropathy), Massage, and Faradism to stimulate the Vasomotor System is helpful.**

This is a general outline of treatment for the cases of simple mania, and even for those milder types of acute mania and subacute mania that can be managed outside of an asylum." - in "A System of Practical Medicine", Vol. IV, 1898.

The Wholeness of Nerve-Cure

"Every sore muscle pours out a little of its poison into the blood-stream; this carries it all over the body, and so to the brain and nerves; so Ill-advised, well-chosen or ill-measured exercise may make us depressed, down-hearted, dyspeptic, or wakeful, for days together.

The human body is a perfect maze of poisons, even in health; every movement makes a little poison: pours it into the blood-stream; so our blood, whose purity we pride ourselves so much upon, at times, is a sewer-stream of poisons; of carbonic acid and of waste garbage that the body's cells cast into it all day and all night long.

The Pressures

Pressure plays a great part in mechanics and so it does in the human body; physicians ever keep a lookout for pressures of blood in the brain or in some "irritable" organ; pressures of gas in the abdomen; pressures of displaced organs one upon another; pressures of morbid thickenings anywhere in the body; when we find a pressure we try to ease it.

Sore Spots

It is always pressure of blood or of fluid or of displaced organs or of morbid thickenings that makes a sore spot; we may find our sore spot in the brain, or in the spine, or in the nerve-sheaths, or in the muscles, or in any internal organ; take it away.

The Apparatus Strains

Eye-strain is not the only apparatus strain; almost every physiological apparatus in the body may suffer a repeated and chronic strain that may wear upon the nerve-core and rob It of some of its strength. So we look for ear-strains, circulation-strains, abdominal and pelvic-strains, and subtract them, when we can.

Circulating Poisons

The physician has to know his body poisons, as the druggist knows his stock; he hunts for them in every new case and is a little pleased to find them because that promises prompt improvement. The brain pours out fatigue poisons of over-doing: emotion-poisons, decomposition products of overemotional excitement. The intestines contribute many poisons, products of enfeebled digestion and of germ-action. The food we eat often fails of assimilation and wanders round the body in chemical forms that poison us. The body-cells everywhere often break down their core-stuff (their nuclei) in their continual fight with invading poisons and come to be poisons themselves.

Then, not content with all these, we add a few extra-poisons: alcohol, tobacco, Drugs.

The subtraction of poison-stuff is one of the most constant cares of nerve-cure. Subtraction is easily one half of nerve-cure; sometimes it is the larger half, sometimes, indeed, it proves to be the whole, because after we have subtracted this or that burden from the tired nerves we find that nothing more is necessary; the "case" of nerve trouble is cured." - Dr H. C. Sawyer, MD in "The Matter with Nervousness", 1909.

The General Principles of Vaso-Motor Therapeutics

"Large numbers are being destroyed annually by Disorders of the Circulation, Nutrition, and Secretions, and thousands are being kept miserable by chronic diseases, for lack of a clear conception of the General Principles of Vaso-Motor Therapeutics by the medical trade, is a statement which cannot be disputed.

To understand this great principle is to get a very different conception of what is comprehended under the nomenclature of disease, and enables us to understand sea-sickness, vomiting in pregnancy, emotional disturbances, and sympathetic ailments, resulting from transmitted nervous irritation.

The effects of heat and cold in producing sickness are recognized, as in diarrhoea originated by heat, and excessive action of the kidneys from the effects of cold.

The onset of cholera in hot climates is peculiarly insidious and without pain; so is the chronic diarrhoea resulting from exposure to the heat of furnaces and hot climates.

Ordinarily some irritating material in the bowels causes slight flux, which, being without pain, soon subsides, calling for no special attention.

In the highly nervous, the irritating ingesta causes reflex vomiting, griping and colic, and passes along the offending material with much violence, thus causing the distress experienced until the irritating cause is expelled.

In the diarrhoea from heat, and that from emotional distress, the spinal nerve centres, and those in intimate connection with them, which directly govern the alimentary canal, becomes suffused with blood much more copiously than is natural by the stimulant effects of excessive external heat, in hot climates, or of temperate climates in summer, and most rapidly by the direct rays of the sun on the patient's back.

The Result Upon the Alimentary Canal may be stated as follows:

1. The blood vessels nourishing the intestines receive a larger supply of nervous influence from the Vaso-Motor centres than before (the operation or application of heat to the dorsum), and hence contracting more vigorously than natural, cut off, to a proportionate extent, the supply of blood to, and consequently nourishment of, the intestinal walls. The bowels thereby lose

their usual vigor, and so become highly sensitive and excitable, and susceptible of being excited and thrown into excessive or convulsive activity by any stimulus applied, which, under their normal condition, would but slightly affect them.

2. When the skin has become blanched and bloodless in sea-sickness, sweat exudes most copiously; so also in the first stage of acute bronchitis, when the bronchial mucous membrane is swollen so as to severely impede respiration from the abnormally large amount of blood circulating in it, and at the same time painfully dry, the application of heat between the scapula, by rendering the Vaso-motor nerve centres more active than before, will not only stimulate the blood vessels of the bronchial mucous membrane to contract, thus lessening the amount of blood circulating in the walls of the air tubes, and causing respiration to become easier, but simultaneously will cause bronchial mucous to be freely secreted, and is usually seen in attacks of bronchial asthma.

It has been found also that when nausea is produced by applying heat to the back, the immediate cause of the nausea has been the pouring out of an abnormal amount of mucous into the stomach, and it has been found that in all cases heat applied to the spine will inevitably increase the secretion of mucous throughout the intestinal canal.

Acting upon this physiological fact, **cases of Obstinate Constipation accompanied by a Feverish State of the Intestinal Tract, and a great want of intestinal mucous, have been overcome by the application of heat in the dorso-lumbar region.** Thus it will be seen how **the bowels may become peculiarly susceptible to the nervous influence which causes irregular spasmodic contractions, as in colic, and the preternaturally frequent and rapid expulsion of their contents, as in diarrhoea.**

Now precisely those hyperaemic conditions of the nervous centres presiding over the bowels, which have resulted in the 2 groups of phenomena already explained, also induce an excessive exaltation of the excito-motor or reflex functions of these nervous centre's, thus causing them to transmit their stimulating influence to the muscular fibres surrounding the bowels, with a copiousness and intensity far surpassing the normal amount, so that the circular muscles, though enfeebled, but rendered peculiarly excitable, contract more rapidly and vigorously than usual.

An Association of the 3 Conditions:

1. Enfeeblement of the muscular wall of the intestine,
2. Preternatural exudation from its mucous membrane,
3. Excessive muscular activity, all dependent upon hyperaemia of the dorsal and lumbar nervous centres, produces all those forms of intestinal flux known as diarrhoea in temperate climates.

The proof of the correctness of this idea lies in the fact that summer diarrhoea may be readily checked by the application of ice to the spine, while diarrhoea may be as readily induced by the application of heat to the dorso-lumbar region.

Diarrhoea from Motion

The motion of a ship being communicated to the abdominal and pelvic viscera, which (rising and falling) cause a more or less violent concussion with each other and with the abdominal walls, and having their contents thus violently agitated, receive a great number of abnormal shocks.

These are conveyed to the superior and inferior mesenteric nervous plexuses, which transmit the complaint to the vertebral ganglia of the great sympathetic.

These forward it along the rami-communicantes to the spinal cord, which thus excited, sends motor impulses in the reverse direction, hence the violent emesis and peristalsis which is set up.

Vaso-Motor Therapeutics

Its Bearing on the Rectal Treatment of Functional and Nervous Diseases

It will be a new theory of the causation of disease to many to learn for the first time, perhaps, that all forms of chronic disease have one common predisposing cause, and that cause is a nerve waste occasioned by orificial irritation at the lower openings of the body.

> ***"It may be that my own experience, a practice confined exclusively to the treatment of chronic diseases for nearly 2 years has multiplied that experience very rapidly indeed, yet it is now sufficiently well established to justify my offering it for your approval or disapproval, as the issue may be: In all pathological conditions, which linger persistently in spite of all efforts at removal, from the delicate derangements of Brain-Substance that induce Insanity, and the various forms of Neurasthenia, to the great variety of Morbid Changes repeatedly found in the coarser structures of the body, there will invariably be found more or less irritation of the rectum, or the orifices of the sexual system, or of both. In other words, there is one predisposing cause for all forms of chronic diseases, and that is a nerve-waste occasioned by orificial irritation at the lower openings of the body. These irritations induce a rigidity of the sphincters guarding the parts, which either continues, sympathetically affecting the rest of the involuntary muscular system, and steadily draining the nervous power that supplies it, until the whole struggle, terminates in a rigor mortis, or, tiring out in the hopeless grip, it relaxes into the inertia of paralysis."*** *- Dr Edwin Hartley Pratt, MD, in "Orificial Surgery and Its Application to the Treatment of Chronic Diseases", 1891.*

In addition to this, there is "the reflex action of irritations in general"; as a rusty nail in the hand or foot or anywhere else, which may irritate, by reflex action, the central ganglia, and induce tetanus; thus pregnancy, by its stretching of the muscle fibres of the uterus, and by its tension at the internal os (mouth), may induce trouble in the stomach, head or heart by reflex action, instead of being felt in the pelvis; and irritation at any of the lower orifices, instead of causing trouble at the seat of irritation, may be reflected to any of the other orifices, or indeed to any other part of the body.

There is an especially close relation between rectal inflammation and lumbar pains, or congestive irritation of the lumbar nerve ganglia, and with the great sciatic, causing lumbago and sciatica; and every one knows of the close relation between the rectum and lungs, the popular belief being that to cure a fistula is to aggravate a lung trouble.

This relation is of special importance, because the chest, in its action, is a great suction pump drawing the blood from all parts of the body back to the heart or centre of circulation. The action of instrumental dilatation of the anal sphincters in suspending the breathing is indicative of this close relation, and demonstrates that any influence that affects the respiration affects also the entire body.

> *"The immediate relief of the respiration from distension of these constrictor muscles, and the known sympathy between all involuntary fibres contracting and relaxing in mutual sympathy, is the only philosophical explanation of the instantaneous and marvellous effects upon the entire circulation following it, setting in motion dormant functions and restoring circulation and functions."*

We may conclude that it is the nerve force that keeps up the action of the whole system, very much as steam keeps up the action of the engine.

Nerve Force

Nerve Force being the moving power in all vital phenomena, a proper supply of Nerve Force means a Good Circulation, and this in its turn secures a vigorous Cell Life in the various tissues; and this means a Healthy Metamorphosis of tissue, constantly going on in a part, or a healthy activity in the process of waste and repair.

This nerve or vital force being of such fundamental importance, it becomes necessary to enquire whence it is obtained, and how it may be maintained or placed in a good condition.

Whence Obtained

The 2 Systems of Nerves:

1. Cerebro-Spinal
2. Great Sympathetic

The cerebro-spinal contained in the brain and spinal cord, presides over the senses and voluntary motions of the body, bringing us into relation with the external world; **the sympathetic presides over and controls organic life and function (the interior phenomena of natural life), in other words, an inner, unconscious, self-existent life, presiding over the deep, hidden processes of growth, nutrition, reproduction, etc., governing the heart's action: circulation; the lungs working: respiration; the action of the stomach: digestion; the great glandular system: secretion and excretion; the elaboration of the vital fluid: assimilation; waste and repair: nutrition and every unconscious operation of our being.**

Both these nervous systems have a radiating centre.

That of the cerebro-spinal is the brain.

That of the Sympathetic System (the cerebrum-abdominale), is in the centre of the body; it is focal to the great viscera of the abdomen: the touching point of lungs, heart and stomach, the location exactly coincident with emotional sensation.

In that spot is found a tissue or network of nerves, the largest of a series of similar clusters of small nerve masses or network of nerves situated near all the internal organs, and closely connected each with the other, forming a chain or circuit of nerve centres, presiding over special functions and bringing every organ into sympathy with every other.

With this system of nervous communication and its influence in functional disturbance we haze very much to do in our specialty, dealing with functional disorders of the rectum, uterus, bladder and sexual apparatus, also with brain and spinal irritation (superinduced by reflected irritation), with mal-nutrition, indigestion and mal-assimilation, asthma and other lung troubles, heart palpitation and many obscure chronic cases really dependent for their cause upon mal-nutrition.

Anent the offices of the great sympathetic nerve in the process of digestion and nutrition.

> *"The abdominal organs do not maintain their tone, secrete their juices and nourish themselves by their own inherent vitality, but they are enabled to do these things because they are enervated, vitalized or supplied with nerve-force by the brain and spine through the sympathetic nervous system. That portion of the sympathetic system which directly supplies the vital (breathing, circulating, digesting) organs with power, is placed for protection and convenience in the great cavities of the chest and abdomen. Here the sympathetic centres, with their connecting nerves, form a double chain in front of the spine, extending from the neck to the pelvis.* ***This outlying dependency of the brain and spine is independent of the will, its nerve-cells are kept charged with nerve force by the central nervous system, and act as reservoirs of vitality for the internal organs."*** *- Dr Herbert Carleton Sawyer, MD, in "Nerve Waste", 1890.*

It will be clearly seen how important to the due supply of Nerve Force to the abdominal organs must be the preservation of these parts in healthy and how serious to the due performance of function in these organs, as well as in those of the pelvis or sexual system, must be the uninterrupted flow of the nerve currents between the central nervous system (the brain and spine), and this outlying chain of nervous ganglia.

This is just what does occur in every case of functional disorder; the interruption of the nerve currents being traceable to local trouble in the lower portion of the rectum.

The removal of this interruption at once changes the whole aspect of the case, and starts the invalid on the road to recovery.

If we continue our enquiries into the particulars about this great sympathetic centre in the abdomen, we find that in this spot (the neighbourhood of the stomach), is found a tissue or network of nerves, which anatomists call the Solar Plexus; it has been termed the "Cerebrum Abdominale" (the brain in the intestines); by a few the "Soul Centre", because writers on insanity designate it as the "Seat of Melancholy."

The true fact is that it is the "Sympathetic Centre", or "Centre of Sympathy" of the body.

It is true, at all events, that the noblest part of our nature (because the centre in which emotion springs, and the house of the principle of being, which is of more importance then the centre of thought, action, or doing), dwells in the great semi-lunar ganglia of the Solar Plexus of the great sympathetic chain of nerve centres.

> *"The emotions are involuntary and are not governed by the reason, and they spring from a centre which is the centre also of a system of nerves that control the involuntary motions of the body. On the other hand, mental operations are comparatively voluntary, and we trace them to the brain, which is the centre of a system of nerves that control the voluntary motions of the body."*

Emotional acts, such as blushing, must be traced to our inner consciousness, not to the brain, but to the Solar Plexus.

The blush is a phenomena of the sympathetic nervous system.

This system has a peculiar power over the blood vessels to alter their size, and it is by the expansion of those vessels that the face is suddenly suffused with rose in blushing.

We explain it thus: the changing colors of the face express emotion; emotion has its seat in (what is popularly expressed as) the heart; (this is misleading, as the heart, which governs circulation, is not an emotional centre); the heart, or centre of sympathy, **is anatomically the Solar Plexus of the sympathetic, and therefore "the centre" of a system of nerves which have the power to alter the diameter of the blood vessels**, and the dilatation and contraction of these vessels cause the changing colors of the face.

The pallor of fright is the effect of a sudden contraction of these vessels; so through the medium of sympathetic nerves the cheeks are mantled with scarlet, or the face is "blanched with the palor of death", just as the sensibility at the pit of the stomach may happen to be touched.

Now what has happened when the sympathetic has lost its power of blushing?

It is paralysed, has partially or totally lost its function.

This is temporary; when permanent, death ensues.

As in the eye a filament of a sympathetic nerve controls the dilitation and contraction of the pupil, so the sympathetic becomes the fountain of expression for the eye; **a straight line of telegraph from the Solar Plexus to the eye and the innumerable variations in the size of the pupil mark a cypher by which the heart speaks.**

A little movement in the eye, almost microscopic, is transcendental in power. The twitching of the eye is imperious over everything, for all the grand motor nerves of the cerebro-spinal are obedient to its sway.

The sympathetic system consists of central collections of nerve cells or ganglion, and these derive connecting nervous filaments (rami-communicantes), from the spinal cord, thus forming a double chain of nerve ganglia in front of the spine extending from the neck to the pelvis; through this arrangement the spinal cord itself, as well as those dorsal segments of the sympathetic from which the splanchnic nerves are derived, is brought into intimate relation, functionally, with the abdominal viscera.

Any direct sedative influence applied to the spinal region is propagated indirectly to the mesenteric plexuses, and less blood being supplied to these nervous centres, any preternatural action in the abdominal or pelvic viscera, such as diarrhoea or flooding, is incapable of being continued; such disturbance of function being admittedly due to the hyperaemia or congestion, more or less excessive, of these nerve centres which preside over the bowels, and notably therefore the superior and inferior mesenteric plexuses.

Vaso-Motor Nervous System

The Sympathetic Nervous System is sometimes called the Vasomotor, but the Vaso-Motor Nerves (to which is assigned the duty of regulating the complicated circulating changes of the entire system) consist of central collections of nerve cells and innumerable fine filaments of nerves encircling like a network, and running along in the walls of every blood vessel of the body — the greater portion being made up of filaments from the sympathetic (which largely predominates in their control), and a few filaments from the motor tract of the spinal cord or central nervous system.

The Vaso-Motor Nerves, which regulate the blood pressure by contracting and dilating the blood vessels, come from the spinal cord. They pass out with the roots of the spinal nerves and then reach their peripheral terminal expansions by various routes which may be classified into 2 principal groups.

The largest group leave the spinal nerves with the nervi-communicantes and enter the sympathetic together, and after running a short distance with the sympathetic, leave it again in 2 ways:

1. As independent branches of the great sympathetic, by the splanchnic nerves, which furnish the vaso-motor supply to the abdominal viscera.

2. Another group return again to the spinal cord through the rami-communicantes and then are distributed to the muscles, bones and skin.

They are also divided into 2 groups according to their function:

I. Those which when irritated contract the vessels.
II. Those which when irritated dilate them.

The vassic-constrictors give tone to the blood-vessels and exert a continual influence on the distribution of the blood and on the fulness of the blood vessels.
They are under the control of ganglionic centres of the spinal cord, especially the Medulla oblongata. The important part played by obstetrics in governing this function led to the supposition that it contained all the centres of the vaso-motor nerves, and the spinal cord none. But Schlesinger showed that it could not be this centre alone that controlled the vasoconstrictors, in 1878, Stricker of Vienna, Austria, proved the existence of centres for the vaso-constrictors on the boundary line between the cervical and dorsal portions of the cord. **The vasomotor nerve centres which dominate the constrictors have been proved by Ludwig and Thiry to control the blood pressure also.**

This is a fundamental law of Physiology, and a second fundamental law discovered by Ludwig was that:

> ***"The blood vessels of the abdominal viscera are the principal regulators of the blood-pressure."*** *- in "Works from the Physiological Institute", Leipzig, 1867.*
>
> *"The blood vessels of the abdominal viscera, have so great a capacity, and by dilatation and contraction can increase or diminish their contents to such an extent, that they act like a mighty reservoir. If this reservoir is wide open, it can contain so large a portion of the total amount of blood that the rest of the organism becomes anæmic. An animal with complete paralysis of the vaso-motor nerves of the abdominal viscera, therefore, bleeds to death, as it were, into its own abdominal blood vessels." - in "The International Encyclopedia of Surgery", 1881.*

Now the nerves which control these abdominal blood vessels lie principally in the splanchnic nerves, therefore when the splanchnics are affected intense hyperemia of the abdominal vessels is produced, with corresponding anemia of other organs.

This hyperemia is an active one, involving an acceleration of the blood current in the affected part, and is of vast extent, involving all the abdominal viscera.

Stricker calls this active hyperemia caused by paralysis of the vaso-constrictors "a hyperemia paralysis" to distinguish it from the hyperemia caused by irritation of the vaso-dilators, which he termed "hyperemia of irritation."

This and the existence of vaso-dilators were discovered by Claude Bernard in 1858. These are liberally supplied to the Sciatic.

The fact that vaso-dilator nerves are contained in the posterior sensory roots is of great importance in the diagnosis of disease, and enables us to understand the doctrine of hyperemia and a number of important pathological phenomena, such as neuralgias accompanied by hyperemia. This is understood when we know that the sensitive spinal roots contain vaso-dilators.

Irritation of Sensitive Roots will necessarily cause pain and hyperemia, and the seat of hyperemia will be found to correspond with the terminal point of the nerve irritated.

This is observed in:

1. **Eczema**
2. **Herpes Zoster**
3. **Etc.**

The practical application of this knowledge lies in it enabling us to understand the difference between the 2 forms of hyperemia of the blood-vessels, and their results, namely:

1. That resulting from paralysis of the vaso-constrictors, which causes the fatal hyperemia of congestion, and inflammation, or apoplexy,

2. That resulting from irritation of the sensitive nerves, and through their reflexes to the posterior sensory centre of the spinal cord (which contains the controlling centres of the vaso-dilators), causing irritation of the vasodilators and temporary dilatation of the blood vessels, flushing of the capillaries, and redness of the surface, as seen in blushing in sensitive or emotional people, and the reddening of a part from rubbing or the temporary application of a mustard plaster.

Paralysis of the vaso-constrictors causes permanent loss of tone in the walls of the blood-vessels, with dilatation and abnormal congestion, which is followed by effusion into the cellular tissue, inflammation and suppuration.

Whereas the hyperemia resulting from the temporary excitation of the vaso-dilators is salutary and beneficial.

The vaso-constrictors exert a continuous tonic action upon the walls of the blood-vessels, and loss of tone in the blood-vessels must be remedied by increased stimulus, and improved nutrition of the vaso-constrictor nerve centres.

But the vaso-dilators only act temporarily when aroused by some special irritation or excitation, as in dilatation of the internal sphinctor muscles, and the flushing of the capillaries which follows is highly beneficial, improving the healthy activity in all parts, increasing the healthy blood supply, and therefore improving nutrition. It is now well understood that the capillaries are the feeders of the tissues, and organs of the body, being themselves tubes of living protoplasm, continuous with the intima of the blood-vessels lining the entire vascular system. The arrangement of nervous filaments supplied to the blood vessels has a most important relation to the comfort of the individual.

The blood vessels are not rigid and unyielding tubes, but are very-elastic, and have the property of dilating and contracting — changes of calibre which occur under a variety of circumstances. For example — when exposed to cold the vessels of the surface contract and the blood recedes to the interior to be kept from chilling; under great heat it rushes to the surface and exudes a portion of its water as sweat to cool the body by its evaporation; under sudden fear the face becomes blanched; under anger it becomes reddened with excitement, etc. In health all goes well, but in weakness of the central nervous system, the action of the vaso-motor nerves is apt to become unsteady, the blood vessels become abnormally susceptible, are not properly controlled, and derangements of circulation result.

Excessive blushing, hot flushes and congestive headaches, show want of control or unsteadiness of circulation from a weakened or irritated nervous system. Constant coldness of feet and hands show vaso-motor spasms.

It is with the vaso-motor system of nerves that we will have most to do in the disturbed functions found present in chronic diseases, and with the reflex irritations dealt with in our special treatment of disease.

Reflex Irritation

To understand Reflex Irritation it is necessary to know the general plan of arrangement of the nervous system and centres; this is double: the voluntary, with two centres; the involuntary, with many centres.

The central nervous system (or voluntary), consists of the brain, a mass of soft grey and white tissue, which fills the cavity of the skull; and the spinal cord, about the size of the little finger and 41 centimetres long, is enclosed in a bony case of skull and spine, and communicates with every other part of the body by means of nerves. Irritation of the involuntary nerve centres does not cause motor spasms as in the voluntary, but impaired function follows, and consequently ill health.

Nerve substance, in health, appears alike in all, but vast differences exist in quality, which cannot be determined, one being that of the philosopher, the other that of the fool.

These nerves constantly transmit nervous sensations from every part of the body, through the spine, to the brain, and conduct nervous impulses from the brain and spine to other parts of the body.

The Principle of Reflex Action

Local disease, causing irritation in any part, is capable of producing back-action or reflection on some other part, thus an impression made upon one part of the body may influence some distant part by influencing nerve-centres common to both.

> ***"The Principle of Reflex Action is the basis of a certain proportion of cases of Nervous Impairment, which might be described as back-acting, Reflex, afferent or inverse Neurasthenic. In this form the nerve-weakness is secondary to local diseases in some other part of the body."*** *- Dr H. C. Sawyer, MD, in "Nerve waste", 1890.*

Slight persistent Morbid Impressions are capable, by their cumulative action, of producing very serious diseases, either at the point of irritation, when it is purely local in its action, or in distant parts, in which case the irritation is reflected to some distant organ (usually the weakest), which shows at first symptoms of disturbed function, from Disturbed Circulation.

And if this is long continued, structural changes follow, abnormal conditions are produced, and a permanently diseased condition is established.

A Great Variety of Chronic Troubles:

1. **Dyspepsia.**
2. **Liver Complaint.**
3. **Asthma.**
4. **Cardiac Distress & Palpitation of the Heart.**
5. **Pain in loins, back, head or down the sciatic nerves.**
6. **Irritation of the Bladder.**
7. **Womb troubles.**
8. **Kidney troubles.**
9. **Spinal weakness or irritation.**
10. **Epilepsy or Fits.**
11. **Chorea or St. Vitus Dance.**

All due to irritation of the great sympathetic nerves from diseases located in the rectum.
Proof: Removal of irritation by the curing of the rectal difficulty cures the distant disease of which it had been the exciting cause.

Examples of Reflex Irritation

An infection in any part of the body may produce Tetanus or Lockjaw; a result distant from the cause.

Epilepsy or Fits, every form of persistent convulsive disorder, Chorea or St. Vitus Dance may result from such apparently inadequate irritatives as hardened wax in the ear, chronic constipation, or rectal ulceration.

The irritation from teething, worms, or undigested food in children frequently causes convulsions.

Phymosis (foreskin of the penis is too tight to be pulled back over the head (glans) of the penis) in children, by the irritating impression of the tight foreskin, has sometimes caused nervous disturbance, convulsions or paralysis.

Chronic Indigestion produces constitutional symptoms and mental disturbances to be seen everywhere.

Nasal Catarrh; a local disorder due to mucous membranal mal-assimilation for its cause, giving rise to the existence of morbid secretions (in which, in many cases, the Asthmatos ciliaris, a minute parasite, finds a lodgment, keeping up a perpetual irritation), may develop a long train of disordered mental and nervous symptoms.

Hay-fever, a purely reflex vaso-motor nervous disorder, arising from the irritating presence of a poisonous pollen on the Schneiderian membrane, is shown to be a respiratory neurosis, in which are sensitive respiratory nerve centres, and unstable vaso-motor innovations from debility due to disordered action of the vaso-motor nervous system, superinduced by rectal trouble, is not only instantly relieved, but positively cured by removal of the source of irritation in the rectum.

Neurotic or Spasmodic Asthma being due to rectal irritation of the great sympathetic or pneumogastric nerve, from indigestion in stomach, is curable in same way; removal of rectal difficulty removes stomach trouble and with it all source of irritation, hence patient is cured.

Many uncontrolable convulsive nervous troubles remain unrelieved because of want of thoroughness in the treatment, it has never gone deep enough to remove the cause or source of irritation.

The curative treatment of convulsive disorders must reach to the removal of the perpetual cause of irritation; whereas usually no account at all is taken of this, and the attention directed solely to the centric irritation or disorder, which is only a result not the cause.

Diseases of the reproductive organs: the womb, ovaries and clitoris in the female; of the prepuce or penis in the male, with the long train of mental and nervous symptoms they give rise to, are directly due to disease in the rectum.

Long series of irritating morbid impressions acting and reacting upon the brain and spine, harass, irritate and depress, these parts, impair nutrition and lessen their capacity for creating a supply of vital force.

Spinal Irritations

> ***"In many cases of spinal irritation, which, no doubt, may be owing to engorgement of the cord and the roots of the nerves, and which produces reflex excitations to distant parts, causing Palpitation, Neuralgia, congestion and engorgement of the parenchyma of the pelvic and abdominal organs, etc., there will be found to exist as a dependent cause a great amount of local irritation in the lower bowel or rectal pouch, and this may be in the character of a subacute or parenchymatous chronic inflammation, contracted sphincters, venous congestion from a condition of semi-vaso-motor paralysis, feverish condition of the alimentary tract, all due to and dependent upon a morbid or abnormal condition of the great sympathetic or nervous system which governs all functional and organic life."***

In such cases local treatment of the rectum and expansion of sphincters is urgently demanded, while cold to the spine will be found eminently remedial.

Spinal irritation with reflex symptoms to various distant parts of the organic system, varying in their character and seat according to the part of the spinal cord affected, have been noticed and recorded by many observers.

Sometimes the exciting cause acts slowly; at others with great rapidity.

In the latter case the portion of the spine affected has been reduced to a condition of susceptibility by mal-assiniilation of nutrition extending over a considerable period of time; or by an active nerve-waste operating more rapidly, and bringing about a state of exhaustion in a shorter period of time, since it may be, as a physiological principle, that any cause capable of reducing the powers of the system may produce spinal irritation.

The underlying pathological condition will be found, in every case of impaired function, or spinal irritation, to be mal-nutrition; and this is applicable to the whole class of Neuroses.

This can be traced in every case to a disordered condition of the great sympathetic, or nerve; governing organic life, and therefore governing digestion, assimilation, nutrition, or as we ordinarily phrase it, waste and repair.

Let there be brought about by local inflammation of the mucous membrane of the rectum, an amount of irritation of the nerve filaments capable of exciting spasmodic contraction of the involuntary muscle walls of any part of, or the whole intestinal tube, and straight-way there is set up a spasmodic stricture or pressure upon the veins or capillaries supplying blood to the part.

Or the same irritation may cause at first contraction (vassic-spasms), followed in time by relaxation of the muscular coats of these blood vessels (vassic-paralysis), and piles result as a sequence, or the nerve currents may be so interfered with as to produce disturbed function in distant organs; or the irritation be transmitted to the greater or lesser sciatic nerves, producing characteristic symptoms of sciatica, or to the lumbar plexus, producing symptoms of lumbago, or to some portion of the spinal cord itself.

It is by such special studies that we find in these local disturbances and diseased processes which give rise to brain and spine complications, grave mental and nervous symptoms, organic functional disturbances and chronic ailments from which thousands have hitherto suffered in helpless despair, who now, in consequence of specialists acquiring great expertness in physical diagnosis and the treatment of neurotic and chronic affections, are daily finding relief, and in scriptural language are able to "take, up their burdens and walk", rejoicing in that health which is the right of every living creature.

Hay Fever, and Neurotic or Spasmodic Asthma, have baffled the general practitioner to find either cause or cure.

> ***"It cannot be traced to any physical cause. There is no local disease to explain the paroxysm, and we can only suppose over-sensibility on nerve ends, and nerve centres to irritants often trivial, and not noticed by ordinary persons."***

We can tell what the physical cause is and to what it may be traced.

It is due to an excess of nervous irritability of "the filaments of the pneumogastric nerves that go direct to the air tube and lungs." **The pneumogastric nerve, as its name implies, supplies nervous filaments, not only to the lungs, but also to the upper part of the alimentary canal, namely the pharynx, oesophagus and stomach; and any indigestion or other irritation of these parts may show its effects in the form of contracted lungs and asthmatic paroxysms. These diseases, however, are dependent upon a pulmonary neurosis, or spasmodic excitability of the nerves of a part, and: Hay Fever, Rose Cold, Hay Asthma, etc., or rather Asthma caused by different irritants existing in the atmosphere and coming into contact with the hyper aesthetic or excessively excitable nerve filaments of the highly sensitive air passages, exciting retlex-motor-spasms and difficulty of respiration. Asthma may also arise from deranged digestion, mal-assimilation of food, rectal inflammation, or whatever else produces irritation of the filaments of the great sympathetic nerve or the pneumogastric. As to its cute, everyone knows that the removal of the patient out of an atmosphere loaded with the pollen of poisonous plants (such as timothy grass and ragweed), suffices to avoid an attack. As a remedy for this Pulmonary Neurosis on which Asthma depends, this we do in by Removing the Nerve Depression, and consequent serious impairment of function by local Treatment of the Rectum. Now we are having evidence presented to us daily of the frequent existence in the rectum of diseased conditions which so affect the portal circulation as to disturb the liver; the intestinal terminal filaments of sympathetic nerves as to produce nervous or irritable indigestion; and to produce such an atonic condition of the muscular coat of the bowels as to partially arrest persistaltic action in them, arrest secretion, prevent absorption, and favor a feverish state with diminished motion and constipation, thus producing a direct irritation of the pneumogastric nerve, to which Dr Thorowgood attributes all spasmodic affections of the breathing apparatus.**

> ***"The rectum receives its nerve supply from the hypogastric plexus of the sympathetic. The nerves supplying the highly sensitive surface about the anal margin, are derived both from the fourth sacral and the pudic; while the external sphinctor and levator ani also obtain filaments from both these sources. The terminal filaments or branches of these nerves communicate freely with the small sciatic, and through it with the sacral plexus and the great sciatic. These communications explain the phenomenon of transferred pain sometimes experienced in rectal disease, mentioned by Brodie in his vol. iii., p. 141."*** *- H. Cripps, F.R.C.S.*

These facts we have known, and have stated before in the following language, showing how functional organic-disturbances are due to rectal, and other irritations quite distant from the organ where the irritation is located:

> ***"The chief nerve supply of the rectum is at the lower portion and around the anus; the middle and upper portions possessing very little sensibility; so little, in fact, that the gravest diseases, as cancer and ulcer, may exist there and not manifest their presence by any pain; and large accumulations of faecal matter may exist in the rectal pouch without causing suffering.*** *The bladder may even be punctured through the rectum without causing pain, and strong caustics applied with little suffering.*
>
> *But at the anus or entrance to the bowel quite the opposite conditions exist, and it is exceedingly sensitive. According to Krause the nerves end in the mucous membrane of the anus in club-shaped bulbs, which lie under papilke — these when enlarged become very painful. An ulcer or fissure occurring there always causes intense pain and sometimes gives rise to spasmodic fits or convulsions because the filaments of a motor or sensory nerve being exposed, an excito-motory apparatus is at once established, and nervous disturbance, or fits, may be the result, although no suspicion of the close connection between the two may exist.*
>
> ***But cure the trouble in the rectum and no more fits occur; proof positive. The pelvic-plexuses of the sympathetic are placed one on either side of the rectum and vagina.***
>
> *Each is composed of prolongations from the hypogastric plexus above, united with branches from the sacral nerves.*
>
> ***The distribution of the spinal nerves serves to explain many of the reflex and so-called anomalous symptoms of pain which are met with in diseases of the rectum and anus.***
>
> ***Thus a pain in the foot at the termination of the great sciatic nerve was removed by curing prolapsing hemorrhoids; the irritation had been conveyed along the pudic nerve to the sacral plexus, thence to the great sciatic and so on to the foot.***

In the same way a Fissure of the Anus May Cause:

1. Pain in the Lumbar or iliac regions.
2. Pain down the Sciatic Nerve.
3. Loss of sensation or Cramps in the legs.
4. Symptoms of Bladder.
5. Urethral or Uterine Diseases.
6. Dyspepsia.
7. Asthma.
8. Heart Palpitation.
9. Heaviness of the Head.
10. Or more General Nervous Phenomena.

The tonic contraction of the sphinctor muscle is (in part at least) due to the influence of a nerve centre located in the lumbar region, and if this nerve connection be injured or severed relaxation takes place and prolapsus follows.
This nerve centre is subject to a variety of influences and the sphinctor muscle may be relaxed or contracted by the will or emotion or local stimulation, as when fear among soldiers when drawn up in line at the beginning of a battle causes many of them to lose control of their bowels and have a passage, soiling their clothing. ***We are thus particular to refer to the supply of nerves to these parts in order to make it clear and plain to the reader how Intimate the Relation is Between cause and effect when Sympathetic Diseases In Various Parts of the System are Found to Have Been Due To Rectal Diseases."*** *- Dr Charles Boyd Kelsey, MD, in "Diseases of the rectum and anus", 1882.*

It is now evident that it is not sufficient to treat the apparent seat of disease, as (for instance), where a pain is located, without removing the cause (which may be far distant), for the reason that the pain only is treated, the cause is not found out and removed. So, very naturally, Nature's Cry For Relief Will return sooner or later. Deficient Nerve Force in any Vasor-Motor nerve centre causes the organs or blood vessels governed by it to become relaxed, the circulation impeded; and with decreased vital power, such parts become congested, and ultimately diseased. Attention to the local symptom or pain (if there be any), is of much less consequence than the restoration of a healthy action to the nerve centres, thereby conveying an abundant supply of vital force to the diseased parts, changing the action therein from a diseased to a healthy one.

Alluding to this important subject, Dr Alonzo B. Palmer, MD, in "A Treatise on the science and practice of medicine, or the pathology and therapeutics of internal diseases", Vol. 1, 1882, very pertinently says:

> ***"Many, even of the enlightened members of the profession, do not fully appreciate how injurious are the effects of habitual constipation.***
> ***The long-continued retention of faecal matter which should be expelled, often undergoing putrefactive changes, is almost certain to be followed by the absorption of materials which contaminate the blood and system.***
> ***Moreover, the presence of mechanically or chemically irritating materials continually impressing and more or less irritating the intestinal nerves, affects very unfavourably the whole nervous system, especially in sensitive persons, and leads to a great variety of sensory, motor, nutritive, functional and even mental abnormalities."***

This Disturbance to the General Health has been produced by the Irritation of the Great Sympathetic Nervous System of Ganglia, which supplies more, terminal filaments to this organ than any other, and lies in direct contact with one of the great ganglionic centres of this Sympathetic System or Chain of Ganglia, Which Bring Into Sympathy Every Organ with every Other Organ in the Body, and in this way Disease, or Disturbed Function at least, Is Found to have Resulted In Every Important Organ of the Human System.

The extent to which inflammatory diseases of the rectum have produced disease in distant parts, through sympathetic action transmitted through the great sympathetic system of nerves and its ganglia, can only be appreciated by close observation and study, coupled with the extensive experience which special practice in orificial surgery alone affords.

Diseases of the Rectum

Are incident to civilized races of mankind and very perceptibly increase with the advancement of civilization. There are but very few, who ever know what trouble comes from that part of the body. **It is now known that the majority of those abnormal pathological conditions of the urethra, prostrate gland, bladder, womb and vagina which were supposed to give rise to irritative disturbance and disease in almost every other part of the human system, are only secondary effects resulting from inflammatory diseased conditions of the rectum.**

To enumerate the diseases produced by irritation of the nerve centres, and consequently curable by treatment directed to the removal of the cause, one would need to recount a list of ailments that would astonish the uninitiated.

Let it suffice to say that proper and thorough treatment of the rectum not only relieves but cures absolutely a formidable list of chronic ailments, including:

1. **Chronic Constipation**
2. **Chronic Diarrhoea**
3. **Dyspepsia**
4. **Bronchial Cough**
5. **Asthma**

6. Palpitation of the Heart
7. Angina Pectoris
8. Heart Syncope from weakness or insufficiency
9. Nervous Debility
10. Impotency
11. Paralysis
12. Hysteria
13. Chronic Melancholy
14. Hypochondria
15. Insanity
16. Mono-Mania
17. Insomnia
18. Skin troubles, including Eczema
19. Herpes
20. Acne
21. Chronic Ulcerations, etc.
22. Muscular Rheumatism, joint affections and a long array of stomach, liver and lung troubles, with sexual disorders too numerous to mention.

In fact, every form of disease in which the cause may be traced to a failure on the part of the nervous system to properly perform its duty.

To choose an illustration:

The fire under the boiler affects the water in the boiler, converts it into steam, thereby creating a force that moves the engine, that sends power and renders useful for practical purposes every machine in a vast manufactory; let there be anything wrong about the boiler and the whole system of machinery is disturbed or deficient in action. Similarly, we say the sympathetic ganglionic system of nerves governs all the functions of all the organs in the body.

The great pelvic plexuses of this system lie in immediate contact with the rectum, and their filaments are spread over every portion of the pelvic cavity governing the animal propensities, as well as the animal functions of the entire system.

Now let there be **any fever with chronic constipation, any inflammation, any ulceration, any fissures, or any fistulas or abscesses; there this nerve is at once affected, its action disturbed, and thus irritation and disturbance is reflected or transmitted throughout the entire chain of nervous ganglia; the general vitality is at once lowered, distant organs are certain to be affected, and it is only a question of which is the weakest and most susceptible to determine in advance which function or organ will be the sufferer. So, given a diseased rectum thus sympathetically connected in the closest relations with every important organ, and the physician has not far to seek for some suffering organ or function, quite distant, it may be, from the diseased part or focus of irritation, and enquiry reveals a indigestion, a heart trouble, or a confirmed asthma, etc.**

Is this difficult to understand?

You say no, but is it true?

We assert it in the most positive manner, that rectal troubles are responsible for 99% of all the functional disturbances to which the great afflicted army of invalids are subjected.

The truth is that the pathological conditions which, through their irritating effect upon the great sympathetic system of nerves, have set up disease in every nook and corner of the human organism, have been either entirely overlooked, neglected, or but imperfectly understood.

But in this, as in every other field of science, the motto applies:

"Knowledge is power and always leads to success."

This brings us to consider the subject of "Nervous irritation."

The "proximate cause" of diarrhoea may help us to understand the influence of the spinal centres over the intestinal canal.

It has been noted that the diarrhoea that precedes Cholera is generally painless, and hence the insidious character of the onset of that fatal disease.

Patients supposing that irritating material in the bowel — irritating injesta — cause diarrhoea and reflex action, resulting in sensations more or less pronounced of the nature of griping colic, the intestinal contractions being both especially vigorous and concentrated in turn and intensity, passing along the offending material with undue force, thus causing the distress.

The effect upon the intestinal or alimentary canal (for we are dealing with it in its entirety), may be stated as follows, and is the same as that which obtains in delicate, highly nervous, and susceptible persons, in whom excessive convulsive activity, or fits, may be induced by the most ordinary excitement.

The blood-vessels nourishing the bowels receive a larger supply of nervous influence from the vasomotor centres than before, and hence contracting more vigorously than natural, cut off to a proportionate extent the supply of blood to, and consequently the nourishment of the intestinal walls.

These lose their wonted robustness and become "highly nervous" and susceptible of excitement, and excessive activity, as in diarrhoea, from causes which in a healthy condition would but slightly affect them.

Sir Andrew Clarke, considers **Constipation both an effect and a cause of disease, and applies the term "Faecal anemia" to "a class of cases in which the elements of disease are retained accumulation in the lower bowel, chemical decomposition with formation of poisonous matter, absorption into the blood and chronic blood poisoning."**

This surely is an indictment sufficiently strong against the evil results of habitual Constipation by the highest and most respectable medical authorities, in our power to quote.

"All pelvic and reproductive organs morbid conditions, are especially aggravated by Chronic Constipation." - Dr Herbert Carleton Sawyer, MD in "Nerve Waste", 1890.

In many instances this Chronic Constipation, is the direct cause of Hemorrhoids from the mechanical pressure on the blood vessels interfering with free circulation, and Verneuil has called attention to the fact that the hemorrhoidal veins pass through the muscular walls, believing that contraction of the muscular fibres of the coats of the rectum compress these veins and obstruct the return of blood to the portal circulation, thereby furnishing **one of the most active causes of internal Hemorrhoids, when taken jointly with a degree of Vaso-Motor Paralysis.**

The anatomical arrangement of the rectal veins corroborate this view:

> *"The veins returning the blood from the anal margin are the middle and inferior hemorrhoidal, the blood from which eventually finds its way into the internal iliac; but the rectum proper returns its blood by the superior hemorrhoidal, from whence the blood passes by the inferior mesenteric to join the portal circulation.*
> *The superior hemorrhoidal veins commence close to the anal verge, rather beneath the muco-cutaneous surface than the mucous membrane proper.*
> *Some 10 or 12 minute branches start from little pouch-like dilatations, pass up the bowel for an inch or more, gradually converging into 5 or 6 larger veins, which uniting eventually form the inferior mesenteric vein. For the first 7 centimetres the rectal veins run beneath the mucous membrane, between it and the muscular coats. They then perforate the muscular coats, running the rest of their course external to the bowel. The hemorrhoidal plexus of veins can be injected through the inferior mesenteric; but there is no communication with the iliac veins; and the hemorrhoidal plexus cannot be injected from the iliac veins, showing communication does not exist." - Dr William Harrison Cripps, MD ,in "Cancer of the Rectum", 1890.*

With this short reference to the supply of veins to the rectum, we will return to a consideration of the Pathology of Diarrhoea, Constipation and Fits, which we think strongly supports our theory of Vaso-Motor Therapeutics. The flux of diarrhoea is undoubtedly increased (if it is not caused), by a copious exudation of mucous, as the result of hyperemia of the nerve centres. This hypothesis accounts for all the phenomena of diarrhoea, and is corroborated by the results of application of heat or cold to the spine. Assuming that the bowels in diarrhoea have become in a condition rendering them peculiarly susceptible to that nervous influence which causes their peristaltic contractions and preternaturally frequent and rapid expulsion of their contents, precisely those hyperemic conditions of the nervous centres presiding over the bowels which have resulted in the two groups of phenomena already explained, induce an excessive exaltation of the excito-motor or reflex functions of these nervous centres, and causes them to transmit their stimulating influence to the muscular fibres surrounding the bowels with a copiousness and intensity far surpassing the normal amount.

Hence these circular muscles, enfeebled, but rendered peculiarly excitable, as explained, contract more rapidly and vigorously than usual.

The association of 3 conditions, viz., enfeeblement of the muscular wall of the intestine, preternatural muscular activity, and excessive exudation from the mucus membrane of the intestine; all dependent upon hyperemia of the nervous centres, constitutes all forms of intestinal flux known as the diarrhoea of summer and hot climates; also long continued chronic cases lasting over a period of years, but due to the same cause and a hyperemic condition of the nervous system.

Peripheral Circulation

It may be commonly observed in debilitated sufferers and persons suffering from Vaso-Motor Paralysis that the superficial veins in the extremities are not full, but scarcely perceptible, while the extremities and surface of the body are always cold.

Now this is capable of explanation in the following manner: If the proximate cause of bowel derangements, chronic diarrhoea, constipation, be what we allege it to be, a hyperetnic condition of the vaso-motor nerve centres in the former case, and its opposite in the latter, it must effect a diminution in the amount of blood in the peripheral blood vessels not only of the bowels but of the whole body, since the contractile force exerted upon the arteries generally will lessen their diameters and will thus lessen the blood currents supplying the capillary vessels throughout the body.

It necessarily must follow that the pulse becomes feeble in volume; textural nutrition being lessened the animal functions will be impaired, and a sense of lassitude and weakness induced.

And, as the vital chemistry in every pore of the structure proceeds less rapidly than before; the lessened blood currents supplying less chemical materials than before, the amount of heat evolved will be lessened and the temperature of the body be lowered.

The bowels being the chief seat of disturbance in Diarrhoea, the sense of coldness and disagreeable sinking sensation is felt there, causing sufferers to resort to warm stimulants and to apply warmth with benefit, wear a bandage of flannel known as “the cholera belt”; to preserve the animal heat, or, as in Sweden, to wear a long leather apron to the knees, and eat pepper corns.

The “cold stage” in all diseases is due to the same cause: “great disturbance of the vaso-motor nerve centres”; hence Ague Congestive Chills, Pneumonia, Sea-sickness, Diarrhoea and Cholera are pathologically related, although different diseases.

Nervous Irritation

It may appear strange to some to hear the assertion made in their hearing for the first time that **Sea-Sickness is due pathologically to Nervous Irritation.**

Yet such is the fact, and it is undoubtedly induced in the following way:

> *"The motion of the ship is communicated to the abdominal and pelvic viscera, which, rising and falling, coming in more or less violent concussion with each other and with the abdominal walls, and having their contents also violently moved to and fro, thus receive an enormous number of abnormal shocks and impressions; these are conveyed to the superior and inferior mesenteric sympathetic plexuses, which transmit the complaint to the vertebral ganglia of the sympathetic. These forward it along the rami-conununicantes to the spinal cord, which — when thus excited to a considerable degree — sends unusually energetic motor impulse in the reverse direction to the circular muscles along the complaining organs.* ***These muscles therefore contract with excessive vigor and co-operate with the preternaturally active mucous membrane of the stomach and other secreting organs along the alimentary canal, inducing vomiting and diarrhea.***
> ***It will be seen, that in this case motion originates irritation; irritation propagated to the nervous centres through the sensory nerve causes an unwonted afflux of blood to these centres, their functional power becomes thereby increased, and consequently their reflex actions become proportionately more nervous and intense."*** *- Dr John Chapman, MD, in "Diarrhoea and Cholera: Their Nature, Origin and Treatment", 1866.*

The conditions of the nervous centres in question induced by motion are closely analogous to those induced by heat, and the results, so far as the bowels are concerned, though less in intensity, are the same in kind as those which heat produces.

The reason why, in Sea-sickness, one person suffers from both vomiting and diarrhoea, and another from vomiting only, is that in those who do suffer from diarrhoea the special segments of the nervous system, which preside over the nutrition and function of the bowels, are especially feeble and excitable, and therefore peculiarly liable to derangement.

The irritation of dentition in children, from irritating ingesta, drinking impure water, inhaling noxious gases, ulceration of the bowels (as in phthisis), the diarrhoea symptom in numerous diseases (as typhoid fever), and forms of the malady in which its primary cause operates in the first instance on the mucous membrane of some part of the alimentary canal, the nerves of which are irritated; the nerve currents to the sympathetic nerve centres and to the spinal cord are greatly increased in number and intensity; these organs become unduly excited and receive an extraordinary afflux of blood; their functional power is proportionately exalted, their reflex activity intensified, and the phenomena of intense reflection along the alimentary tract necessarily ensues; which is diarrhea.

This is often associated with nausea and vomiting, pallor, coldness of surface, feeble pulse, weakness of all degrees, and in its extreme form with fatal collapse.

In all these instances the proximate cause is hyperemia of the spinal and sympathetic nervous centres, including especially the mesenteric plexuses.

Anxiety in some persons brings on diarrhoea.

Fear will do the same, as in case of soldiers before a great battle; so also will painful emotions in some; vehement excitement of the feelings in others; mental emotion in some, and any violent emotion producing hysteria in many nervous ladies ends in a movement of the bowels; in others fits or convulsions.

In all such cases congestion or hyperemia of the nerve centres is the primary physical fact; the order of causation being as follows, and much the same in all fits: Terrifying or exciting impressions, suddenly communicated, are conveyed to the sensory ganglia and are thence distributed to the cellular structure constituting the cerebral convolutions; these are thrown into tumultuous excitement, which is propagated along the motor tracts with the rapidity of lightning down the whole spinal axis, and latterly to the ganglia of the sympathetic.

These, becoming suddenly swollen with blood, instantly act with intensely vehement energy, and diffuse their subtle stimulus in all directions.

As the source of the powerful impressions which they have received is cerebral in this case, so the chief direction in which the Vaso-motor impulses are reflected is toward the brain; hence quick as thought the cerebral arteries are contracted with preternatural energy, and thus, in extreme cases, the brain being rendered comparatively bloodless, the person is stunned as if by a blow; the face pallid, cold sweat exudes from it; if consciousness is not abolished mental power is still greatly enfeebled; and, in the same manner and by the same agency as the phenomena of ordinary diarrhoea are induced, the strength of the whole muscular system is impaired; the temperature of the surface of the body is lowered; the muscular walls of the intestines enfeebled; their mucous membrane exudes its appropriate secretion superabundantly; their peristaltic action becomes excessive; thus emotional diarrhoea, or diarrhoea originating in mental emotion, is clearly due to the same proximate cause as that on which all forms of intestinal pluxes depend — namely, that whatever may be the primary or ultimate causes of the various forms of diarrhoea, the proximate cause of all is the same, viz., by hyperemia (more or less excessive), **of these nervous centres which preside over the bowels, and notably, therefore, of the superior and inferior mesenteric plexuses.**

The logical deduction to be made from all this is that if we can control the amount of blood in the spinal nerve centres by removing internal irritation, increasing or diminishing it at our command, we should be able to avert, control or absolutely cure any case of obstinate constipation, chronic diarrhoea, or congestion of the lower bowel, we might encounter.

This we accomplish by removing the brake from the wheel — by expanding the sphinctor muscle to a judicious extent so as to relieve the Vaso-motor paralysis which allowed stasis of blood to take place in the hemorrhoidal and mesenteric veins, thus superinducing the formation of piles; or, if the mucous membrane be very vascular, a sedative effect by application of cold or heat to the dorsal and lumbar regions, as circumstances may indicate, because, as a matter of fact, it is possible to lessen the amount of blood in nervous segments along the back at a considerable distance above or below those particular segments over which heat or cold is applied. In like manner bowel disturbance may effect by irritation several nervous segments, producing a correspondingly wide range of symptoms.

All this is in obedience to a natural physiological law dominating the nerve centres, viz., "that when one nervous segment is rendered either anemic or hyperemic, the adjoining one will assume a like condition, though in a lesser degree, which those further removed will, in proportion to their nearness, also participate in the state impressed on the one first affected." As the spinal cord, and those dorsal segments of the sympathetic from which the splanchnic nerves are derived, are intimately related, functionally, to the abdominal viscera, it follows that any intestinal irritation, such as the diarrhoea of dentition in children, will produce spinal irritation, preternatural excitability, general irritability and convulsions, often ending in hyperemia or permanent congestion and permanent epilepsy or paralysis.Conversely (in relation to the treatment of the diarrhoea and cholera), by the application of ice along appropriate segments of the spinal region, that influence being propagated indirectly to the mesenteric plexus, the whole nervous centres involved are supplied with less blood than before, and are thereby rendered incapable of continuing those preternatural actions on which the production and continuance of diarrhoea depend.

"These considerations, led me to treat diarrhoea (and all other intestinal fluxes) by the application of the spinal ice-bag along the lumbar and lower dorsal regions in all cases; and when the cerebral and thoracic conditions are such as to permit the exertion of a sedative influence along the cervical and upper dorsal region, to avail myself of the great additional power which may be exercised by applying ice on each cell of the rubber bag at once along the whole spine", and children fall into a calm sleep in consequence. In relation to cholera, says: "I hold that the general arterial contractions effected throughout the system by the vehement operation of the cause in question, viz., extreme hyperemia of the spinal and spmpathetic nerve centres, by depriving the capillary vessels in all parts of the body of their wonted supply of blood, induce the muscular debility, tremors, vertigo, impairment of respiration, cold breath, sense of faintness, coldness of the whole surface of the body, coldness and lividness of the lips and tongue, blueness of the entire surface of the body, the sunken and appalling countenance, and the fatal collapse characteristic of the disease.

"That the nausea, vomiting, "rice water stools", cold sweat, peculiar odor from the body, etc., are due to the continued action of the hyperemic spinal cord and sympathetic nervous centres, in the same manner as they induce phenomena of the like kind, though less in degree, in summer diarrhoea, sea-sickness, etc., adding significantly that "if any spinal congestion o. inflammation threatens to occur, special applications of heat should be made; in head affections (as cerebro-spinal meningitis) along the cervical and upper dorsal vertebra, in chest affections (as pneumonia) between the scapula, and in abdominal affections along the lower dorsal and lumbar vertebra."

The instinctive action which leads persons when cold in winter to warm themselves by turning their backs to the fire, and the general glow of warmth which rapidly spreads throughout the system in consequence, everybody is familiar with, and is but another illustration of the influence of the spinal nerve centres and the lateral sympathetic spinal ganglia associated therewith. The general principle, of which this treatment of diarrhoea is an application, forbids the use of drugs and stimulants. Heat, as an auxiliary remedy, should be had recourse to in severe cases, as, for instance:

> *"The operation of the spinal ice-bag in overcoming the vassic spasms generally should be facilitated by keeping the patient warm with blankets; and co-operation of a like kind should be afforded to overcome the special coldness (vassic spasms) of the abdomen by the application of heat over its surface, and the same to overcome the special coldness (again vassic spasms) of the hands and feet."*

Again, M. Claude Bernard and Dr Brown-Sequard have proved that the governance or control of animal temperature belongs to the sympathetic, and is in all cases attended with coldness of the surface; it is due to vasic spasms from irritation of the Vaso-motor filaments of this nerve.

> *"There are facts to prove that a continuous electrical current applied to the back by moistened conductors has a physiological action on the spinal cord, and sympathetic, for a current directed to the lower cervical and upper dorsal will cause the iris (of the eye) to contract, showing that there is physiological transmission of part of the current to the cilio-spinal region of the cord and corresponding ganglia? of the sympathetic which preside over the functions of the iris or pupil of the eye. Also that a continuous current applied to the lower lumbar portion of the spine will cause a glow heat in the legs and feet without any direct application to these latter, of or to the inside of thigh, and will be felt in the foot,* ***showing same connection as in sciatic pain transmitted from rectal irritation."***
> *- Dr Julius Althaus, MD*

This application of m galvanic current to the spine exerting the same kind of influence on the congested spinal cord, and sympathetic ganglia, and through the latter on the vascular system generally, proves the same physiological connection as does the application of ice to the spine.

> *"The immediate action on the mucous membrane of the alimentary canal of all stimulants and irritants, increasing the amount of blood in that membrane, is objectionable, as their ultimate action on the nervous system intensifying the hyperemia of the nerve centres, must prolong and intensify the malady.* ***I have a strong conviction that coffee is capable of acting very injuriously on persons predisposed to undue action of the automatic***

> ***nerve centres, causing, in some cases, a peculiar and distressingly exciting influence upon the heart, through the sympathetic, and affecting the kidneys similar to opium through the spinal and ganglionic nerve centres.***
> *All influences, whether intellectual, moral or physical, which tend to exalt the activity or susceptibility of the nervous system, increase its liability to derangement, and notably predispose it to those perverted actions called "functional diseases", of which diarrhoea and cholera are examples; moreover, in eastern countries the use of opium creates in the nervous system a condition peculiarly favourable for the generation of cholera symptoms by the solar heat. And the great increase of "Functional Disorders" in Europe and America within the present century may be referred not only to the increased activity of the nervous system as expressed in the intense excitements, anxieties, and struggles, incident to the present phase of modern civilization, but also to the free use of nerve stimulants, of various kinds, that induce hyperemia of the nervous centres.*
>
> *It is well known that the poisonous influence of tea, coca, opium and alcohol is on the vaso-motor nerve centres, and that in the initial stage of its effects "the cerebral arteries are so closely clasped by their muscular coats (vassic spasm) as to prevent even that moderate flow of blood through the brain which is essential to that process of nourishment forming a part of the function of sleep, hence they induce a condition of wakefulness."*

Pamphlet on "Restoration of Health, or Treatment of Disease without Drugs":

"A new Orificial Philosophy, which advocates the following principles relating to disease:

1. Disease is remedial effort. In other words, it is an effort of nature to remove obstructions or correct abnormal conditions.

2. All curative power exists in the living system. Men may supply conditions, and thus facilitate recovery, but nature does all the healing work.

3. Drugs and medicines never cure. They may change the seat of disease, may create new diseases, but they never cure the patient.

4. The agencies which nature can use in her healing work are those known as hygienic, the chief of which are pure air, proper food, pure water, proper clothing, sunlight, exercise, test, mental influences, and electricity. Disease originates in an abuse or non-use of these agents, setting up an irritation in the nerve centres, or at the mouths of organs causing reflex disturbances; health is only to be obtained by the removal of all local causes of irritation in the orifices of the body.

5. Disease or irritation of an organ always begins at its mouth, bodily nerve waste begins at the openings or orifices of the body; and the lower ones especially, for obvious reasons.

6. The condition of the nerve power of the sympathetic has more to do with the health of the human body than is generally supposed.

7. The fundamental principle of the new philosophy is that orificial irritation is a predisposing factor in chronic diseases generally, acting through the vaso-motor paralysis, which it induces, causing inertia and interference with functional activity.

8. Orificial Treatment will cure chronic and functional diseases without the aid of medicine." — Dr Hill.

9. The long continuance of a disorder, the failure of the system to rebound spontaneously, or respond to remedial measures is evidence of nerve waste. In such cases there can invariably be found some irritation at the lower openings of the body.

10. The smoothing of the rough openings of the body, and the securing of proper dilatation of the sphineters guarding the lower openings, immediately and permanently improves capillary circulation, and hence the nutrition of the body is improved, and its reactive powers increased. "By such treatment 80% of all the cases now abandoned as incurable are found to be easily, safely and permanently cured." - Prof. Dr Edwin Hartley Pratt, MD

> ***"We may say that the world is becoming enlightened upon this subject; this is the case with the more intelligent classes, and especially does the medical profession seem to be awakening to a recognition of the truth of the principles above stated. It may be said that drugs are still largely employed by Allopathic (Medical Trade), Homeopathic, Eclectic and Hygienic Physicians; this is true, notwithstanding the fact that many of the most eminent men in these different schools have unhesitatingly declared their unbelief in the efficacy of drugs as remedies for disease. The greater the quack the more medicine given or prescribed." - An Eminent Man in his address to a representative assembly of Physicians and Surgeons.***

Here is the chief ground of complaint which the new philosophy finds against the Medical Trade. College professors and learned doctors admit and even declare the truth, but in their practice persist in perpetuating methods of treatment which are only consistent with old and exploded theories.

The following admissions of some of the most eminent of the Doctors of Allopathic (Medical Trade) Medication, and then attempt to harmonize such confessions with the nearly universal practice of drugging and dosing every ailment:

> ***"Modern medicine inclines to regard diseases no longer as distinct entities, but, rather, as perverted life processes."*** *- N. A. Review, July, 1873.*
>
> ***"No specific remedy will cure."*** *- Reynolds, in his compendious work on practice*
>
> ***"All our curative agents are poisonous; and, as a consequence, every dose diminishes the patient's vitality."*** *- Prof. Alonzo Clarke, MD*
>
> ***"All medicines are poisonous."*** *- Prof. St. John, MD*
>
> ***"Drug Medicines; cure one disease by producing another."*** *- Prof. Martyn Paine, MD*
> ***"Drugs do not cure disease."*** *- Prof. Jos. M. Smith, MD*
> ***"Medicines have destroyed more lives than war, pestilence, and famine combined."*** *- John Mason Good, MD*
>
> ***"Every dose of medicine given is a blind experiment on the vitality of the patient."*** *- Dr Bostwick*

The late Sir Benj. Brodie, physician to Queen Victoria: "I have ceased to rely upon drugs for the cure of diseased conditions. I rely upon the healing power of nature — the vis medicatrix naturae."

My own testimony is that no medicine can give energy; that must come from the conversion of food into nerve force. I believe in reconstructive medicine: Curing by Nutrition.

Active, living organs cannot long continue to perform their functions if not kept up to a normal standard by healthy nutrition.

The healthy nutrition of the various organs is dependent upon a healthy circulation, and a proper absorption and assimilation of nutriment.

If the blood current is strong and free, we are well; if, on the other hand, the general circulation is sluggish, if local congestions occur, disease is a necessary consequence, because the blood being the nutrition circulator, the tissue depends on it for food supply.

All remedial measures for the relief of the ills of the body should be directed to the establishing of a healthy nutrition and circulation, which means a healthy digestion, or vito-chemical metamorphosis of food into nutriment of the blood, which contains all the assimilative nutrient elements of digestion ready for absorption and assimilation into the cell life of the various tissues, providing for the means of growth, activity and repair.

Now as there could be no assimilation without the product of digestion furnishing the material to assimilate, and no circulation without the power upon which it depends (nerve force), on which alone the circulation depends for its activity; therefore, a proper supply of nerve force means a good circulation, with all its advantages, while waste of nerve force, or an insufficient supply, means a weak, or poor circulation, with all its consequences.

This nerve force comes from, and is supplied by the vaso-motor filaments of the great sympathetic.

It is admitted by physiologists that both the cerebro-spinal and the sympathetic nervous systems are concerned in influencing vasomotor function.

The various emotions can affect the action of the heart, and digestion or the action of the stomach, and even assimilation, as some suppose, through the cerebro-spinal system, and this influence may extend to Oxygenation of the Blood in the Lungs, to Cell Life or Metamorphosis of Tissue, both as regards waste and repair, growth and decay.

While through the involuntary or sympathetic nervous ganglia the vital force necessary to carry on the animal functions during waking or sleeping, active or resting, is furnished independent of the will, but not independent of the cerebro-spinal system altogether, as some have asserted, for the nerve force of the sympathetic is supposed to be derived from the cerebro-spinal, although natural order would suggest the very opposite. Each system of nerves, as before explained, has its own special function to perform.

The Cerebro-Spinal controls the action of every voluntary muscle of the body, and Prof. Pratt calls it:

> ***"The direct connecting link between the spiritual and physical man."***
>
> *Muscles are either voluntary or involuntary. All voluntary muscles are striated, all involuntary muscles are not striated. The former are under the direction and control of the cerebro-spinal system. The latter are caused to act only by an influence that comes from the sympathetic nervous system.* ***These involuntary muscle fibres are made to constitute one of the coats of every tube in the body; including the alimentary canal, the respiratory ducts, the urinary tracts, and the blood-vessels and lymphatics, and they are so arranged in circular and longitudinal layers as by their alternate action of contraction and elongation to secure rhythm (or vermicular motion), by which all involuntary processes are carried out."***

We live by the automatic action of tubes. **These involuntary muscular fibres are in close sympathy, and any spasmodic contraction of any of them by any local or reflected irritation**, will speedily excite contraction in the adjoining fibres, and may thus be transmitted to the entire mass of involuntary fibres, as in cholera or tetanus, interfering thereby with the proper functions and circulation of the entire body; relief of this tension will afford in such cases universal relief. The lower openings of the body are supplied with sphinctor muscles arranged in double manner. The most internal are involuntary and controlled by the sympathetic. The more external are voluntary and controlled by the cerebro-spinal nervous system. Spasmodic contractions of the sphinctor muscles of the bladder, and the internal sphinctor of the rectum, will waste nervous power and lower the tone of the entire nervous system. The sexual organs in both sexes taking their nervous supply from the sympathetic, it follows that whatever wastes sexual power, causes a waste of sympathetic nerve force, and correspondingly weakens every organ controlled thereby. With these data in view, the following proposition was made in 1887 by Prof. Pratt, which subsequent experience has confirmed, and every one who has had the advantage of an extensive experience will admit that it has a much wider application than was imagined by its author.

It is in reference to the intimate relation between orificial irritation and chronic suffering in all its forms, and the reflex action or effects of irritatives in general, before now fully dealt with in this brochure, more particularly the close reflex relation existing between the rectum and lungs.

It is this:

> ***"All forms of chronic diseases have one common predisposing cause, and that cause is a nerve waste occasioned by orificial irritation at the lower openings of the body. That these irritations induce a rigidity of the sphinctors guarding the parts, which either continues sympathetically affecting the rest of the involuntary muscular system, and steadily draining the nervous power that supplies it, until the whole strength terminates in a tigor mortis, or tiring out in the hopeless grip, becomes exhausted and relaxes into the inertia of paralysis."***

Irritation at any of the lower orifices may not be felt at the seat of irritation, but be reflected to any of the other openings or to any other part of the body.

Owing to the action of the respiration on circulation, any influence that affects respiration affects also the activity of the entire body. The effect upon the respiration of stretching the sphincters, and the close sympathy existing between all involuntary fibres contracting and relaxing in mutual sympathy, Prof. Pratt considers:

> ***"The only philosophical explanation why orificial work has such instantaneous and truly marvellous effects upon the entire circulation; warming at once the extremities which before were abnormally cold, and cooling parts that were abnormally hot, setting in motion functions that had long been dormant, subduing the obstructing action, and thus restoring order out of functional chaos; in a word, more or less completely re-establishing uniformity of function and circulation throughout the entire system."***

The whole problem of the treatment of chronic diseases, according to this theory, is, to re-establish and maintain a strong and steady circulation of the blood, and the first step to that end is "by proper orificial work to stop the involuntary nerve waste which is invariably found to exist."

Much of the disease and weakness of the male sex (mental, nerval and physical) might be entirely prevented by proper attention to the hygiene of the sexual system. The entire reproductive apparatus derives its nerve supply from that general reservoir of sympathetic influence upon which we rely for the performance of all the vital functions.

A waste of sexual power therefore must mean a waste of sympathetic power in general, or the undermining of all the life-giving forces of the system.

The orificial treatment for sexual weaknesses is simple and effective, the results far-reaching and frequently marvellous in their character.

> ***"The treatment of diseases of these parts has been solved by the introduction of one simple measure, which allays sexual irritability in the young, cures impotency and restores the lost powers of those advanced in life, develops atrophied testes, reduces those hypertrophied, offers the greatest relief for prostatic troubles, and extends its healing influence to the bladder and kidneys. The influence for good this measure exercises over the entire system can only be appreciated by those who have seen the practical results obtained by this method."*** *- Prof. Pratt*

Thus far we have considered only the methods recommended for the removal of sources of irritation at the lower orifices of the body, in order to stop the waste of nerve force in the treatment of chronic diseases.

After stopping the nerve waste by removal of orificial irritation, I would add nutritive remedies, and the tissue cell salts of Schusster.

The after treatment should include every possible physical means of promoting and establishing a vigorous and healthy circulation.

This may include Electricity, Massage, Pure Air, Cheerful Surroundings, Fresh Food well cooked, Hydropathy, etc.

Vaso-Motor Influence Over the Circulation

The presence of foreign bodies, local irritation in the stomach, bowels or rectum, may produce excessive contraction of the muscular coat of the blood vessels, and thereby diminish its nutrition, as inhibition of the nerve currents in a nerve supplying a part may produce excessive relaxation; as when the vagus is irritated it causes the heart to beat slower and the respirations to proportionately increase in frequency.

Let us not leave this by merely stating it as a fact, but understand just why it is so. The filaments from the Vagus Nerve sent to the heart are inhibitory in function, and when stimulated they necessarily diminish the pulsations of that organ, while those distributed to the lungs have a function which might almost be called a special sense, viz., that of translating the irritation, which results largely from an excess of carbonic acid gas, into a sense of air hunger, or a desire for more oxygen.

These nerves belong to the sympathetic nervous system.

Vaso-Motor Nerves

In warm-blooded animals we have, abundant evidence of the influence of the nervous system on the calibre of the arteries.

Thus division of the cervical sympathetic on one side causes dilation of the minute arteries of the head of the same side, shown by an increased supply of blood sent to the parts, if performed on a rabbit the effect on the circulation of the ear is very striking.

The whole ear is redder than normal; its arteries are obviously dilated; its veins unusually full; innumerable minute vessels, before invisible, come into view; and the temperature may be more than a degree higher than on the other side.

Division of the sciatic nerve causes similar dilation of the small arteries of the foot and leg; the vessels of the balls of the toes are seen to be dilated and injected; and a thermometer placed between the toes shows a rise of temperature amounting to several degrees.

Division of the brachial plexus shows a dilation of the blood vessels of the arm.

This may be demonstrated by means of the plethysmography in which the arm is introduced into a close chamber filled with fluid.

An increase or decrease of blood sent into the arm will lead to an increase or decrease of the volume of the arm, and the amount of pressure of the fluid can be easily registered.

Division of the splanchnic nerve? produces a dilation of the blood-vessels of the intestines and other abdominal viscera; therefore irritation of these nerves would lead to congestion of bowels.

Division of the hypoglossical nerve on one side causes dilation of the vessels in the corresponding half of the tongue.

Division of a nerve supplying a muscle causes a large and sudden increase in the venous flow from the muscle, indicating that the muscular arteries have been dilated; and in the frog this dilation consequent on section of the nerve may be observed by placing a thin muscle under a microscope and watching the calibre of the small arteries, and the circulation through them while the nerve is being cut.

So that in all parts of the body certain vascular areas stand in such relation to certain nerves that the division of the nerves causes a dilation of the minute arteries in, and a correspondingly increased supply of blood to that area.

These nerves we speak of as Vaso-Motor Nerves, or as Nerves containing Vaso-Motor Fibres, and these Vaso-Motor Fibres are found sometimes in Sympathetic Nerves, and sometimes in Cerebro-Spinal Nerves. - (Foster.)

Therefore, says Riechot, if the division of a vaso-motor nerve, or nerve containing vaso-motor fibres, leads to the dilatation of the arteries of its appropriate vascular area, it is obvious that previous to that division these arteries were in a state of permanent constriction, due to a permanent constriction of their muscular coats.

This permanent constriction may vary considerably in degree, and is spoken of as "tone" or "arterial tone" by physiologists.

This is normal to arteries whose vaso-motor fibres have not been cut, and which are otherwise in a normal condition.

But, when the vasomotor fibres have been divided, constriction gives place to dilation, the arteries are said to have lost tone, and when the constriction becomes greater than normal from any circumstance, the tone is said to be increased.

This "arterial tone" is the most important factor in the circulation.

This is diminished in the condition Burton describes as constitutional venosity.

In the normal condition of the body the minute arteries are in a state of tonic constriction; it is the resistance offered by this constriction which constitutes the peripheral resistance, one of the 2 great factors of blood pressure.

The normal flow of the blood is dependent upon this; changes in this tone in the blood vessels of any particular area affects the circulation very injuriously.

Changes in a small vessel by constriction or dilation is seen more in its local than general effects. If human, the area of the artery affected is large, the general effects are vassic hyperemia.

If a monometer be connected with the carotid artery and the splachnic nerve be divided, a conspicuous and steady fall of pressure is observed, because section of the splanchnic nerve causes the mesenteric and other abdominal arteries to dilate, and then, being very numerous, a large amount of peripheral resistance is taken away and the blood pressure falls accordingly; a large measure of flow into the portal veins takes place, and the supply of blood to the face, arms and legs is proportionally diminished.

This dilation of the arteries is not instantaneous, but somewhat gradual.

This condition is observed in derangements of the portal circulation from Vaso-motor paralysis, and is evidenced by bowel congestion and pallor of face, with coldness of the extremities.

Arterial tone, both general and local, is a powerful instrument for determining the flow of blood, to the various organs and tissues of the body, and thus becomes a means of indirectly influencing their functional activity.

We find that the Vaso-motor nerves are connected with, and arterial tone is regulated by, the central nervous system, and that the calibre of the arteries of any vasicular area may be varied according to the varied needs of the system.

Section of the cervical sympathetic in the neck causes dilation or loss of tone in the blood vessels of the head and face. No such dilation of the vessels of the head and face takes place when the thoracic sympathetic chain is divided anywhere below the upper thoracic ganglia; but dilation does occur after division of certain of the rami-communicantes connecting the spinal cord with the cervical sympathetic through the lower cervical or upper thoracic ganglia.

Hence the normal tone of the arteries of the head and face is maintained by influences produced from the cerebral nervous system passing through certain rami-communicantes into the cervical sympathetic, and ascending to the head and face by that nerve; or in other words, the vaso-motor fibres of the vessels of the head and face may be traced from the sympathetic to the lower cervical ganglia, and thence by rami-communicantes into the spinal cord.

In a similar manner the vaso-motor fibres of the splanchnic nerves, giving the mesenteric and other abdominal arteries, can also be traced into the spinal cord; as may also those of the sciatic governing the blood vessels of the leg, and of the brachial nerve, governing those of the fore arm.

In fact, **all Vaso-Motor Fibres may thus be traced into the Spinal Cord, being all connected with the Central Nervous System.**

There are also nerves in the body, stimulation of which always brings about arterial dilation, as well as section, while other nerves there are of a mixed character, intermediate between the cervical sympathetic, and the muscular nerves, in which stimulation produces at one time constriction, at another dilation, such as the sciatic section of this nerve produces dilation of the vessels of the foot, but the dilation soon disappears, the foot becoming cool and pale.

In all these cases section produces dilation; subsequent stimulation causes constriction or dilation, as may be.

This explains the condition of things found in disease.

But there are other nerves, such as the nervi-exigentes. section of which does not produce any marked change in a vascular area, and yet stimulation brings about dilation often of an extreme character.

The erection of the penis is chiefly due to dilation of branches of the pudic arteries, whereby a large quantity of blood is discharged into the Veinous Sinuses.

Now erection may be artificially produced by stimulating the peripheral ends of the divided nervi-exigentes, which are branches from the 1st, 2nd and 3rd sacral nerve passing across the pelvis, an interrupted current to the peripheral ends of these nerves, secure turgidity of the corpus cavernism.

Simple section of these nerves will not of itself give rise to an erection.

Similarly the Sub-marillary Gland, a secretory organ, is supplied by 2 nerves, the chorda-tympani and the cervical sympathetic; section produces no effect; but stimulation of the former causes dilation, of the latter constriction.

Now all this shows a tone in certain parts independent of the central nervous system, as in the corpora-caveruosa and sub-maxillary gland.

Also there are nerves which when stimulated cause dilation, or vaso-dilator nerves, and nerves which, when stimulated, cause constriction, or vaso-constrictor nerves. Now the vaso-motor fibres of the nervi-exigentes, chorda-tympani, and muscles are vaso-dilators of the cervical sympathetic and splanchnic nerves, are vaso-constrictor.

In the cases of the corpora-caveruosa of the penis and the sub-maxillary gland, dilation is the result of complete or partial loss of local tone; in fact, vaso-dilators act by inhibiting and vaso-constrictors by augmenting the activity of the local mechanism giving rise to local tone.

From the erection of the penis which follows stimulation of the nervi-exigentes, and the injection of the sub-maxillary gland, which follows stimulation of the chorda-tympani, inhibition of the heart by stimulation of the vagus or pneumogastric. Just as the rhythmic contraction of the heart fibres is stopped by the vagus, so the true contraction of the arterial fibres is stopped by the change of nerve segments.

Thence it is self-evident that dilation is in all cases synonymous with inhibition and constriction; in all cases mere augmentation of local tone.

It is possible that dilation may be brought about in different ways, and so also with contraction. The general effects of dilation are briefly these: Supposing that the total quantity of blood issuing from the ventricle remains the same, that is to say, supposing that the quantity of blood put into circulation is constant, the surplus passing through the dilated area must be taken away from the rest of the circulation; consequently the fulness of the dilated area will lead to an emptying of the other area.

This is seen very clearly when the dilated area is a capacious one.

At the same time, local dilation causes a local diminution of peripheral resistance. This in turn causes a lowering of the general arterial pressure.

The effects of local constriction (similarly local and general), are naturally the reverse of those of dilation.

In the vascular area directly affected less blood passes through the capillaries in a given time, and in consequence less total interchange between the blood and the tissues takes place (diminished nutrition of tissues), though each unit-volume of blood which does pass through more deeply affected.

The blood pressure in the corresponding arteries is increased, and, if the area be large, the pressure in even distant arteries may be heightened.

This subject is of vast practical importance to every medical practitioner who wishes to understand the disturbances of the circulation of the blood which occur in the system. It is not by any means exhausted, or much more than touched upon, but if what has been written will help to interest the profession in the study of Functional and Reflex Disturbances, I shall be satisfied." - Dr W. E. Bessey, MD, in "Vaso-Motor Therapeutics", 1892.

"There is no gap between Principles of Causation of Disease, and its Effects and the Principles of Therapeutic Application.

It represents a logical science system of cause and effect consistent throughout all fields of the concept. It is applicable to the Body As A Whole.

There Is No Purely physical plane; nor a purely chemical plane.

It is a Complex Whole of Physiological Physics and Biochemism, a Living Organic Unit, whose inherent vital processes are actively and potentially complete, and modified by structural conditions, Functional Usage, Environment and Diet. An early beginning of viscus disorder, following vertebral lesion pathology, is change in caliber of blood vessels, due to the Vasomotor derangement of the corresponding vertebral segment.

The same universal principles of blood vessels and nervous tissues are applicable here as elsewhere in the body. Recognition of these universal principles is very helpful to an understanding of disease processes.

First there is a contraction of the vessels due to the abnormal stimulus or irritation of nerve fibers. This is followed very shortly by dilatation due to the inhibiting effect of the lesion on the nerve fibers.

Unless the inhibition is removed the dilatation remains; and the nutrition of the vessel's endothelial cells is involved. Following the dilatation of the arterioles, capillaries and veins blood plasma escapes, then the leucocytes and red blood corpuscles.

This is the pathological condition called Diapedesis (diapedesis, or leukocyte extravasation, is the process where white blood cells (specifically leukocytes) pass through intact blood vessel walls into surrounding tissue to fight infection or inflammation).

It follows lesions of the Vasomotors, and consequently is found in various organs, ganglia and tissues innervated by these fibers.

Owing to the nutritional importance of the Vasomotors any derangement of the same would mean a predisposing factor of disease.

Typical of these changes of deranged nervous impulses, subnormal circulation and glandular involvement of stomach, intestines, pancreas, liver, spleen and kidneys the following findings are significant and universal, differing only in degree." - Dr Cart P. McConnell, DO, in "Studies in Osteopathic Pathology IV", Journal American Osteopathic Association, January 1929.

Osteopathic Principle

"Osteopathic Principle thus lends itself to all stages of disease developed with equal readiness and with equally scientific basis.

Treatment, therefore, consists of finding and alleviating those factors of environment which are subjected to change.

These are found to be in the main, nutritional.

By nutritional is meant quantity and quality of nutrition delivered to it, opportunity for riddance of end products of metabolism and probably some quality of nervous stimulus.

Hence, treatment to kidney tissue would include constitutional treatment to improve quality of vascular fluid, or to relieve constitutional influences over the distributing mechanism, blood-vascular, nervous, and finally treatment to the kidney itself.

This would be directed toward those local factors which interfere with the local distributing mechanism, the emanating vessels and tubes and doubtless toward those fibers, if present, which supply individual cells with nerve influence.

This local treatment has earlier been indicated as directly structural, through tensions and pressures upon vascular and parenchymatous tissues by way of

the stroma and capsule, and indirectly upon the blood-vascular structures through the medium of perverted origin of stimulus arising in related segmental structures, as articular, extra articular and within the kidney itself, which could and surely do interfere with the maintenance of nutritional and functional blood supply to the kidney.

Local treatment should include all means of insuring functional movements of diaphragm, quadratus lumborum, and psoas muscles.

Indirect local treatment over involuntary nervous pathways must effect relief from local irritations or anesthesias from all structures from which impulses may be perverted in their distribution to nucleii of control over blood vessels to the kidney.

Viscerally this includes most specifically the tissues of the urinary tract which are closely associated embryologically and are found to be closely associated reflexly in the adult stage.

There is a wide field of methods suggested for reduction of disturbances of the urinary tract distal to the kidney.

All effective measures are good Osteopathy.

Somatically, indirect treatment should include any method of approach which will successfully permit the reflex arcs to regain the normal manner of functioning.

It is scarcely necessary to remark that manipulative treatment to the articulations and soft tissues of the somatic origin of impulses has been the most used procedure with which the profession of Osteopathy has found it possible to produce continued clinical proof to refute the never ending attacks upon its right to continue as a profession and its efficacy as a therapy.

Manipulative treatment to the tissues in which sensory impulses arise, which are related reflexly to visceral blood supply, has worked consistently throughout the life of the osteopathic profession and concept. It still does." - in "Some Special Applications of Anatomical Factors in Nephritic Physiology", A Symposium on Renal Diseases, JAOA, October 1929.

Cerebral Toxaemia a Major Factor in Insanity

"The effect of any or all of these arrests or poisonings is to overcharge the Blood with Excrementitious matter; Septic Absorption intensifies the blood poisoning more than the others; and alcohol, for the time being, if in large quantity, so far as the brain is concerned, intensifies most of all.

Whatever the poison or poisons and whatever the intensity or duration, the result is to poison structures functionally active and to induce irritation of the nervous system.

Puerperal Delirium and Hallucinations, whether or not they amount to Insanity, are due to Cerebral Toxaemia, as the evidence of asylum practice and private practice can abundantly testify.

The experience of private practitioners will furnish illustrations of Toxaemia with Hallucinations of the special senses, sometimes coherent, often delirious.

Thus a lady heard a bell ringing in one ear, and a railway whistle in the other, while another had on one side hallucinations of the sound of paddle wheels, and bagpipe music on the other.

They were both cases of Puerperal Fever, exanthematous and septic respectively. With a view to confirm, or correct my conclusions regarding the Mutual Relation of Mental Disease and Blood Poisoning, Particularly that Due to Septic Absorption and Zymotic Contagion, I consulted the tables of the British Medical Association Collective Investigation Committee on Puerperal Pyrexia.

They furnish 3 kinds of evidence bearing upon the present inquiry, and as they are not prepared with reference specially to Mental Disease, the evidence cannot be regarded as garbled.

Symptoms of the first kind are in the order of their appearance mental-pyrexial, of the second pyrexial-mental, and of the third mental-pyrexial-mental. The gaseous products of putrefaction are themselves of no small account in this connection. An examination of the urine demonstrated bile in several cases, yet not so frequently as I was led to expect from the Colour of the Skin and the Putrefactive State of the Faeces.

Sometimes where little else was found, pigmentary deposits were sparsely distributed over the microscopic field.

Bile vomits have not been infrequent in the early history of my puerperal cases, occurring very soon after labour, and not being always explicable in the same way. The stomach was in such instances very irritable, and bile was more frequently ejected than anything else; Nervous Reaction, Portal Congestion, or a Loaded Colon and Rectum, separately or in combination, probably accounting for this.

The pharynx and fauces were often found relaxed, atonic, and irresponsive to reflex stimulus, the same conditions probably existing in all the involuntary muscles.

It cannot be denied that:

1. There is a fertility in the sources of Puerperal Blood Poisoning.
2. That in proportion to the number of the sources (and more serious still), to the intensity of the poisoning is the ratio of potentiality of Mental Disease.

Septic Absorption bas been credited with a considerable share in the production of Puerperal Insanity. In some cases I have found Septicaemia and Insanity Develop almost Coincidently, and except on the theory of direct nervous propagation, it was difficult to prove their relations as cause and effect.

In one series of cases, It Was evident that Septic Absorption Appreciably Preceded the Mental Overflow, while in another series it was equally evident that the Mental Symptoms were pre-existent, and became intensified after the inception of the Septic Process." - in "The Journal of Mental Science", Medico-Psychological Association, July 1887.

Some Notes On Fascia

"Fascial release allows the physiological forces within to manifest their "unerring potency" in aiding the recovery process." *- Dr Hitch, DO, in "Malalignment of the Sternum and Fascial Strain", Journal of the Osteopathic Cranial Association, 1954.*

"Fascia does serve a supportive and packing function for other tissues and organs; however when we consider that this same tissue, in a broader sense, presents the immediate environment for all the cells of the body, it assumes new implications as a physico-chemical entity which may effect, directly or indirectly, the activities of all other tissues in both health and disease." *- Dr Snyder, DO, in "Embryology and Physiology of Fascia", Journal of the Osteopathic Cranial Association, 1954.*

Chapter 28

Water Is The Driver Of Nature

> ***"Water is the Driver of Nature. Knowledge is the supreme good, the supreme evil is physical pain. We are composed of two separate parts, the soul and the body; the soul is the greater of these two, the body the lesser. Knowledge is an excellent thing for the mind, and pain is the most grievous thing for the body. Just as the supreme evil is physical pain, so is wisdom the supreme good of the soul, that is to say of the wise man, and no other thing can be compared with it. In the days of thy youth seek to obtain that which shall compensate the losses of thy old age."*** *- Leonardo da Vinci, in "Thoughts on art and life", 1906.*

Water Has 4 Phases, Not 3

> *"The overriding philosophy of the laboratory is that science is essentially simple." - Dr Gerald H. Pollack, PhD, Biomedical Engineering, University of Pennsylvania; BS, Electrical Engineering, Polytechnic Institute of Brooklyn.*

Dr Gerald Pollack maintains an active laboratory at the University of Washington in Seattle. He is the Founding Editor-in-Chief of WATER: A Multidisciplinary Research Journal; Executive Director of the Institute for Venture Science; founder of the Annual Conference on the Physics, Chemistry, and Biology of Water. Prigogine Medal for Thermodynamics; the University of Washington Annual Faculty Lecturer; National Institute of Health Director's Transformative Research Award; and the 1st Emoto Peace Prize.

The 4th Phase of Water

"We Study Water:

Our recent discoveries have shown that Water has 4 Phases, not 3.

We are exploring the role of the fourth phase of water in all of nature, particularly in human health.

The findings are summarized in the Book:

"The Fourth Phase of Water: Beyond Solid, Liquid, and Vapor", 2014.

Unveiling the secrets of the world's most common substance.

At the University of Washington laboratory we have discovered that water is Not always H2O.

When touching most surfaces; water transforms itself into so-called "Exclusion Zone" "Exclusion Zone" (EZ) water, whose formula is H3O2.

"Exclusion Zone" EZ water differs in all respects from H2O.

And, there is a lot of it, everywhere.

Can Water really Contain Energy?

Early pioneers, including Viktor Schauberger, and Rudolph Steiner, provided ample evidence that **Water could Store, and Deliver Energy.**

Water as an Energy Converter

When water absorbs light, the absorbed energy builds structural order and drives charge separation.

That stored potential energy is harvestable: charge separation can produce electrical current; and structural order can drive cellular work.

These conversions confirm water's ability to store and deliver potential energy.

Water Stores Energy

Water molecules have effectively split into Negative and Positive, creating something that looks like a Battery; a chemical factory with separated charges.

Battery-like charge separation remains evident even when the exclusion zone grows into idiosyncratic. Water absorbs Energy from the Sun.

That energy separates water's Positive and Negative charges.

The resulting "battery" may release charge for doing work.

Water-based batteries of this kind exist wherever hydrophilic surfaces interface with water. That's virtually everywhere.

In the cell, for example, the densely packed materials expose hydrophilic surfaces that order the surrounding water into EZs; hence, cells contain numerous nano-batteries.

Water batteries should also exist in aqueous suspensions and solutions, because EZs surround the suspended particles or dissolved molecules.

All of these scenarios create batteries, which are manifestations of water's 4th phase.

In 2003 we discovered a new phase of water; "The 4th Phase of Water."

Water is H20, however, the 4th Phase of water is H3O2, and that phase is surprisingly abundant: it constitutes the majority of the water in our body.

The 4th Phase of water, occurs next to water-loving (hydrophilic) surfaces.

It projects out from those surfaces by up to millions of molecular layers.

And, its physical and chemical properties differ from those of ordinary liquid water.

The 4th phase of water massively excludes substances, much the same as ice.

Subsequent experiments; show that this 4th Phase is charged; and, the water just beyond is oppositely charged; creating a battery that can produce current.

And that Light charges this battery.

Thus, it is understood that water receives, and processes Electromagnetic Energy (light), drawn from the environment, in much the same way as plants.

This Absorbed Energy, can be exploited for Performing: Chemical, Electrical, or Mechanical Work.

The 4th phase of water, is crystal-like, and crystals can store information.

These new discoveries are rich with implications: they provide an understanding of how water processes solar, and other energies; and they provide a foundation for a fresh and simpler explanation of natural phenomena, ranging from weather and green energy to biological phenomena, such as the origin of life, transport, and osmosis." - Dr Gerald H. Pollack, PhD, BS, in "The Fourth Phase of Water: Beyond Solid, Liquid, and Vapor", 2014.

The Central Role of Water in Cell Function

"Earlier studies have revealed; **Extensive presence of ordered, interfacial water inside cells.**

Subsequent reports have detailed the properties of this interfacial water, which lies next to hydrophilic surfaces including those inside the cell.

Interfacial, Ordered Water has been given the name "Exclusion Zone" (EZ) or "4th Phase" Water.

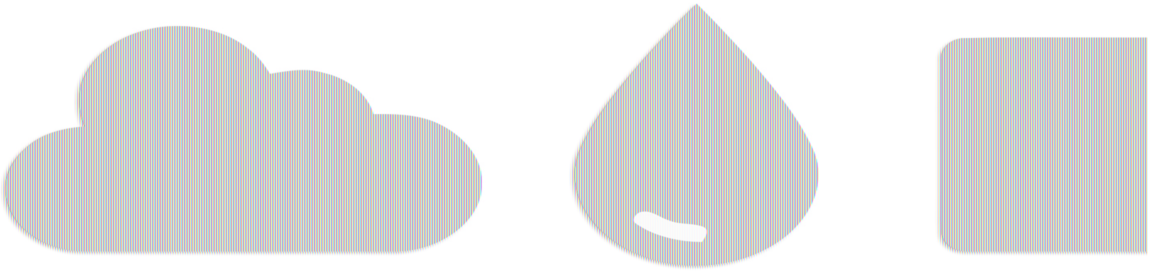
The central role of water in cell function, has been known since the time of Albert Szent-Gyérgyi, the father of modern biochemistry, who received the Nobel Prize for discovering Vitamin C, wrote:

> ***"Water, the Hub of Life - Water is its mater and matrix, mother and medium.***
>
> ***Water is the most extraordinary substance! Practically all its properties are anomalous, which enabled Life to use it as building material for its machinery.***
>
> ***Life is Water dancing to the tune of solids.*** *That biologists forgot about it is no more than natural." - Albert Szent-Gyérgyi, in "The Living State With Observations on Cancer", 1972.*

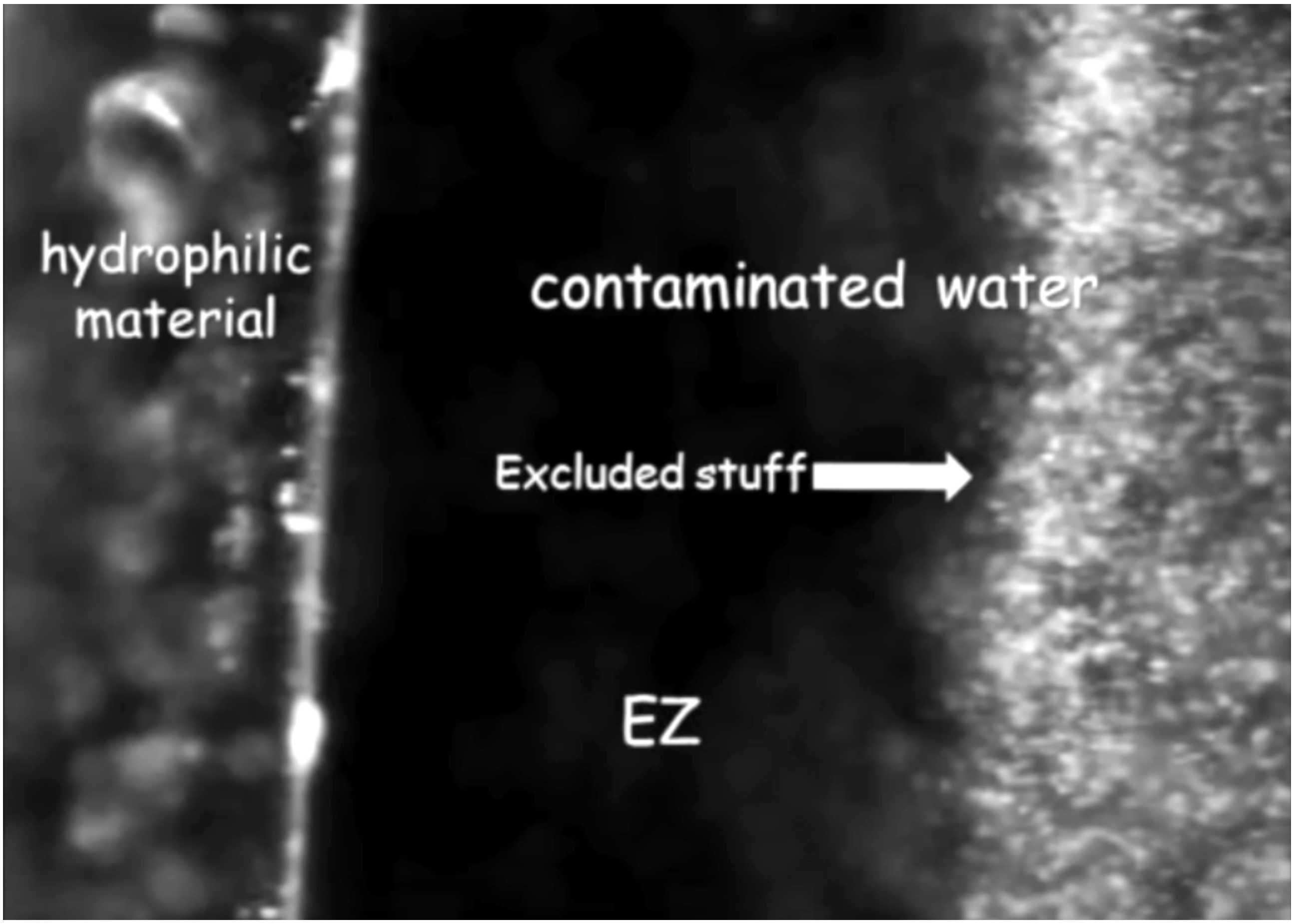
This aphorism was given additional substance with evidence that the transition from ordered (now called "Exclusion Zone" (EZ) or "4th Phase" Water.

Water to bulk water was an important trigger of many physiological actions, and that **without that water, the cell could not properly function.**" - in "Effect of Health-Promoting Agents on Exclusion-Zone Size", Dose Response, September 2018.

The 4 Phases of Water



Phase 1 - Gas Phase 2 - Liquid Phase 3 - Solid Phase 4 - Gel-Like


hydrophilic material
contaminated water
Excluded stuff
EZ

The Gel-Like Nature of the Cytoplasm

"If membrane integrity is not essential, then what holds the contents inside the cell?

If you consider Cytoplasm; as a gel instead of an ordinary aqueous solution, then an answer may be at hand, for gels don't necessarily disintegrate when sliced; the contents will not spill out.

Biologists acknowledge the Cytoplasm's Gel-Like Character, but textbooks nevertheless build on aqueous solution behaviour. A gel is quite different from an aqueous solution; It Is a Matrix of Polymers to which Water and Ions Cling.

The concept of a Gel-Like Cytoplasm turns out to be replete with power.

It accounts for the characteristic partitioning of ions between the inside and outside of the cell. It also explains the Cell's Electrical Potential: potentials of substantial magnitude can be measured in gels as well as in demembranated cells.

Thus, the gel-like character of the Cytoplasm accounts for the basic features of cell biophysics. The focus then shifts from statics to dynamics.

Here again the question: Is whether adequate explanations can emerge from the cell's gel-like character?

Contrary to the common perception, gels are not inert.

With modest prompting, polymer gels undergo structural transitions that can be as profound as the change from ice to water, which is why they are classified as phase-transitions.

Polymer-gel phase-transitions are commonly exploited in everyday products ranging from time-release pills to disposable diapers.

They have immense functional potential.

I explore the possibility that: The Phase-Transition Could Be a Common Denominator of Cell Function.

By Cell Function I mean:

1. **Material Transport.**
2. **Motility.**
3. **Division.**
4. **Secretion.**
5. **Communication.**
6. **Contraction.**
7. **Among other essential functions.**

Driven by the notion of simplicity; I suggest that much of cell biological function may be governed by a single unifying mechanism:

The phase-transition." - Professor Gerald H. Pollack, Department of Biology, McGill University, in "Cells, Gels and the Engines of Life A New, Unifying Approach to Cell Function", 2001.

How Water Works In The Body

“Dr Andrew Kaufman, MD - **How what processes of the cell, utilize the energy from excessive negative charge? What are the ways that the cells utilize uh this electrical potential?**

Dr Gerald Pollack – **We have explored at least one of them, and that is: Flow.**

There are numerous Flows inside the cell, inside the body, and we demonstrated first of all, in the laboratory, that: if you take a tube, that looks like a section of a blood vessel, for example, but a tube made of material, that's Hydrophilic “water loving” (Hydrophilic materials are substances that attract, absorb, or dissolve in water due to their “water-loving” nature, which comes from their polar or charged molecular structure), and you simply immerse the tube in the water, and horizontally to place it at the bottom of the chamber.

You don't expect anything, but we found something. We found that the Flow occurs through the tube like through a straw, Perpetually, Essentially Perpetually.

So some energy has got to drive it, because you can't achieve Flow without energy.

And and we found that, it is this Battery-Like-Potential. Essentially this electrical potential is used to drive the Flow, and we found later that this Energy is used in the Cardiovascular System to help Perpetuate Flow.

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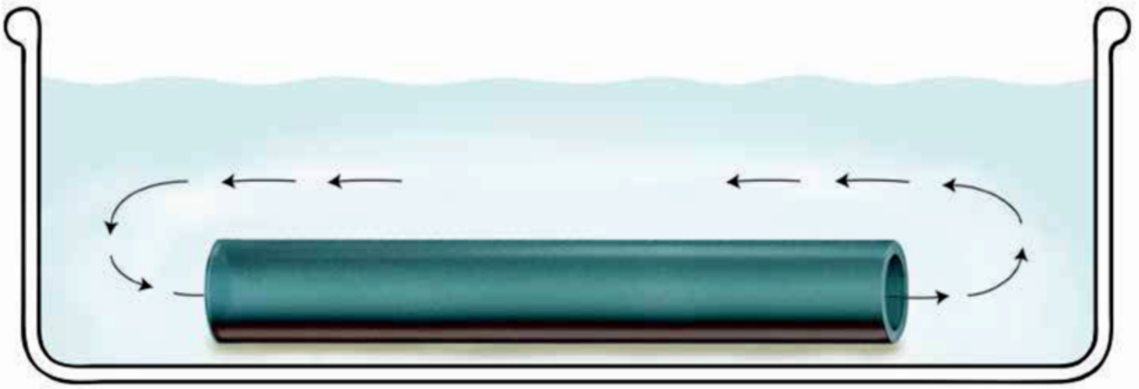

Figure 2. Practically incessant flow occurs through hydrophilic tubes immersed in water.

We all think that; Flow in the Cardiovascular System, is driven completely by the heart, but it turns out there are half a dozen studies, that demonstrate, that if you stop the heart, Flow continues.

The Flow doesn't stop. And we could confirm it in the laboratory the same thing. So it means that it's not just the heart.

There must be something else that's working along with the heart.

And we found indeed, that it is experimentally confirmed that it is this Flow phenomenon, that I just mentioned, that's actually responsible, and so what we confirmed is that in our Cardiovascular System it's not just the heart that's doing the work, it's the vessels as well.

So, the energy we're talking about this Battery-Like-Energy.

That's just one example that we know of, in which the battery-like-energy is getting used.

- Where does the energy come from that allows water or what are the necessary ingredients for water to adopt this energetic structure?

Dr Gerald Pollack - You can't create energy from nothing. You can't create it, or destroy it. All you can do is transform it; from one form, to the another. We could observe this fourth phase or exclusion zone as distinct from from the rest of the water with a particular setup in which we put particles in the water, and this zone a pure liquid crystalline kind of zone, would exclude these particles.

The first step in the photosynthetic process is; Light impinges on the leaves of the plant, and what it does is effectively, it takes water and separates the water into OH- and H+. It's actually rather common in in nature. So we found it's Light. We did a lot of additional experiments to check out what wavelengths are important, and we found that Red is important, but Infrared, that is beyond wavelength, slightly longer than Red, is profoundly able to build the exclusion zone. So, the answer; at least One Source of Energy is Light. So, it means if if this is working within our bodies, it means that in some sense we act like plants. We have more in common with plants, than we might think.

Light is important. Infrared Light particularly is important, and Red Light.

And it's been used Therapeutically now widely, Red Light Therapy, and Infrared Light Therapy. It Works For So Many Syndromes."- in "How Water Really Works in the Body: Dr Gerald Pollack Redefines the Science of Life", 22 August 2025.

> ***"While Ultra-Violet, and Visible Light penetrate only hundreds of micrometres to 1 mm through human tissue (skin, muscle and fat), the Near-Infrared (NIR) window of 650–900 nm, also known as the optical therapeutic window, is ideally suited for in vivo applications owing to minimal light absorption by haemoglobin and water coupled with substantial penetration through human tissue reaching ~10 cm. In this study, we leveraged a type of molecular mechanical action on cells induced by single-photon NIR light. We discovered that when we activate the vibronic mode of a cell-membrane-associated molecule, it results in concerted whole-molecule vibration, on subpicosecond timescales, inducing rapid cell death."*** *- in "Molecular jackhammers eradicate cancer cells by vibronic-driven action", Nature Chemistry, 19 December 2023.*

> ***"The vibration activated by Near-Infrared Light means that anything surrounded by the molecule will be destroyed, in this case, the cancer cell. Every time the light hits the molecule, that molecule starts expanding and contracting. In one second, the molecule will oscillate or vibrate one trillion times. It's so fast that by the mechanical forces around the molecule because of that vibration, it will disassemble the biological structures. Once the beam of light is activated on the tumour, it will kill the tumour cells that are illuminated."*** *- in* ***"Scientists Destroy 99% of Cancer Cells in lab using new technique with 'vibrating molecules",*** *Euronews, 8 January 2024.*

Please see "Plasma Is 99.99% of Everything That Is", in Chapter 3 of this Book.

Chapter 29

The Endocrine System

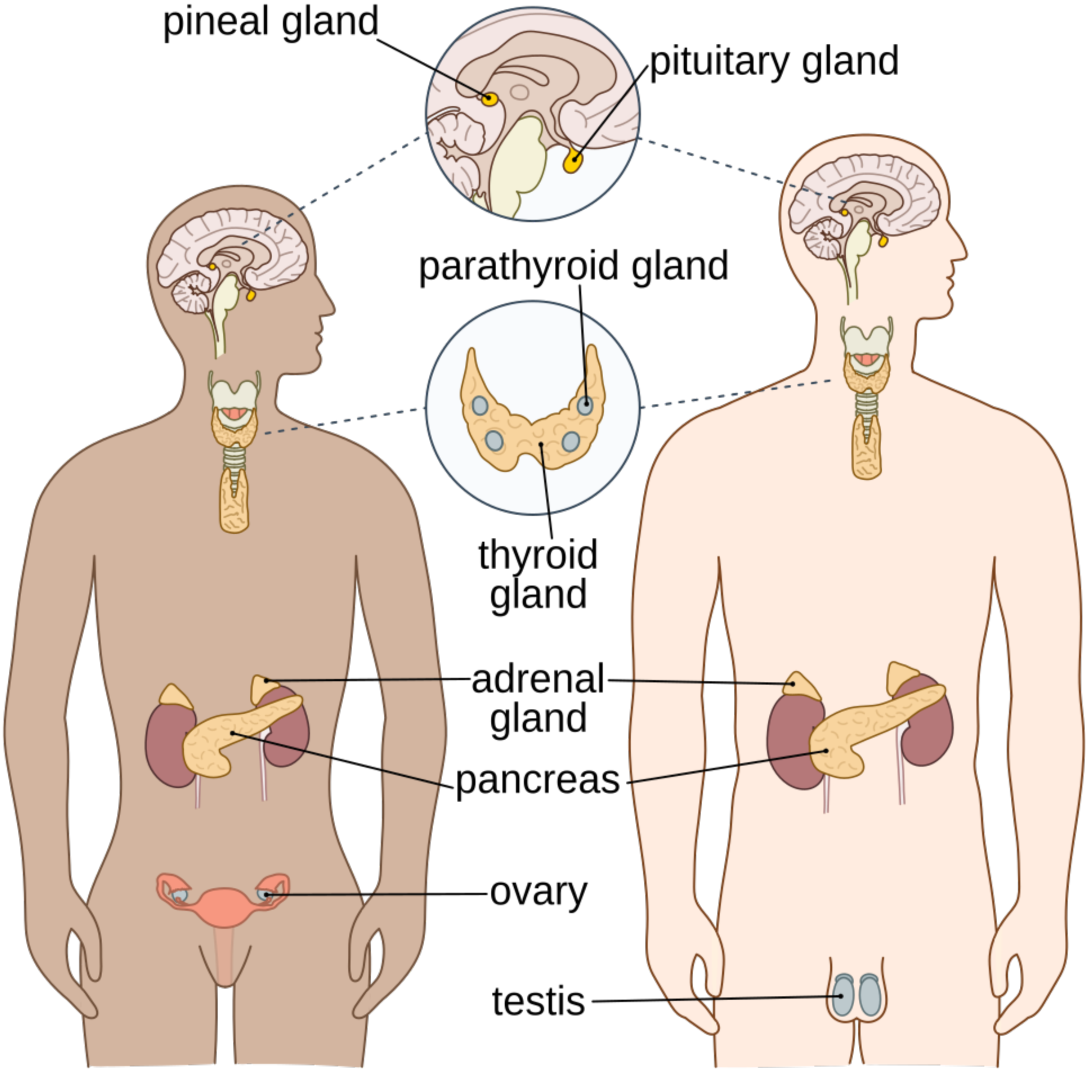
pineal gland
pituitary gland
parathyroid gland
thyroid gland
adrenal gland
pancreas
ovary
testis

Image Source: Wikipedia 2024

Anatomy of the Endocrine System

Endocrine System Adrenal Gland Procedures

The Endocrine System is a complex network of glands and organs.
It uses Hormones to control & coordinate the body:

1. Metabolism
2. Energy level
3. Reproduction
4. Growth & Development
5. Response to injury
6. Response to stress
7. Response to mood

The Integral parts of the Endocrine System:

1. Pituitary. The pituitary gland is located below the brain. Its size is no larger than a pea, the gland controls many functions of the other endocrine glands.

2. Pineal body. The pineal body is located below the corpus callosum, in the middle of the brain. It produces the hormone melatonin, which helps the body know when it's time to sleep.

3. Hypothalamus. The hypothalamus is located at the base of the brain, near the optic chiasm where the optic nerves behind each eye cross and meet. The hypothalamus secretes hormones that stimulate, and or suppress the release of hormones in the pituitary gland, in addition to controlling water balance, sleep, temperature, appetite, and blood pressure.

4. Thyroid and Parathyroid. The thyroid gland and parathyroid glands are located in front of the neck, below the larynx (voice box). The thyroid plays an important role in the body's metabolism. The parathyroid glands play an important role in the regulation of the body's Calcium balance.

5. Thymus. The thymus is located in the upper part of the chest, and produces white blood cells that fight infections, and combats abnormal cells.

6. Adrenal gland. Adrenal glands is located on top of each kidney. Like other glands, the adrenal glands work in cooperation with the hypothalamus and pituitary gland. The adrenal glands make and release Corticosteroid hormones and epinephrine that maintain blood pressure and regulate metabolism.

7. Pancreas. The pancreas is located across the back of the abdomen, behind the stomach. The pancreas plays a role in digestion, as well as hormone production. Hormones produced by the pancreas include insulin and glucagon, which regulate levels of blood sugar.

8. Lyden Gland. It is located in and above the gonads, the activity passes through the gonads. Lyden is the meaning or the seal, while Leydig is the name of the individual who indicated this was the activity. Both terms (Leydig and lyden) refer to the same gland. The Leydig gland is anatomically above the reproductive system. This is consistent with the anatomical location of the Leydig gland as noted by Franz Leydig. Although anatomically above the reproductive system, the physiological activity of the Leydig affects (or is directed to) the reproductive organs in both males and females. This is also consistent with the physiology of the Leydig gland as noted by Franz Leydig. So the gland is above, but its activity passes through the reproductive organs.

9. Ovary. A woman's ovaries are located on both sides of the uterus, below the opening of the fallopian tubes (tubes that extend from the uterus to the ovaries). In addition to containing the egg cells necessary for reproduction, the ovaries also produce estrogen and progesterone.

10. Testis. The testes produce testosterone and sperm.

The Activity of the Endocrine System

The Endocrine Glands of the human organism, their functions in relation to physical body, and their relations to the mental and spiritual forces.

For this is the system whereby or in which dispositions, characters, natures and races all have their source. Hence, as is the natural thing, they are not present in a dead body. For as in some manners, some activities, there is an activity within the system produced by anger, fear, mirth, joy, or any of those active forces, that produces through the glandular secretion those activities that flow into the whole of the system. What are the activities of the glands?

Most every organ of the body may be considered a gland, or at least there must be within the functioning activity of each portion, as the eye, the ear, the nose, the brain itself, the neck, the trachea, the bronchi, the lungs, the heart, the liver, the spleen, the pancreas; that which enables it to perform its duty in taking From the system that which enables it to Reproduce itself! That is the functioning of the glands! Not as a whole only, but as individual well as the whole. There is then, in the system that activity of the Soul, that is the gift of the Creator to man. It may be easily seen, then, how very closely the glands are associated with reproduction, degeneration, regeneration; and this throughout, not only the physical forces of the body, but the mental body and the soul body.

The Glandular Forces then are ever akin to the sources from which, through which, the Soul Dwells Within the Body.

Why is the race of the people in America growing taller and taller.

The exercising of the glandular forces as related to the activity that produces within the system, the extension of the physical structural forces of the body!

Then we find the Endocrine System, not glands but system, is that which is disseminated throughout the whole of the body, as related to the physical forces of same; and may be studied or may be followed in their relationship not only to the physical structural forces of the body but to what we call hereditary, and environmental forces and how they may be expected to react upon the system.

The Life Force Rises Directly From the Leydig Gland (Lyden Gland), through the Gonads, thence to Pineal, and then to the other centers.

Hence the Pineal and the Leydig are the Seat of the Soul!

As it rises and is distributed through the other centers it returns to the solar plexus area for its impulse through the system.

Where is the dwelling place of the Soul in the physical body?

What is the connection or center through which the mind and the soul function, that makes one individual a devil and another a saint?

The Connection of the Soul to the Physical Body: The basis, the seat of the soul, in that of the Lyden Gland, with the pineal reaction in the system, and this the activity that brings about psychological conditions.

When someone is born (the soul is pre-existent), the soul, thus, takes flight from other realms of experience, and connects itself to the physical body.

This is called birth in the material world.

These should be the studies. Then, they may be applied to that purpose for which each Emunctologist came into being: Aiding Seekers to Find Health, understanding and prosperity in their own environs.

Then, find the answers to these in that ye have attained, in that which has been given. Ye comprehend that though there may be the complete development to manhood or womanhood, the foetus in its activities, the gland of reproduction becomes the source from, and through which impulse acts.

Thus it is the source of propagation throughout the experience.

Ye have gained that, the first movement of same physically reaches out and becomes the brain, through which the pineal in its activity brings its physical development; and that it is related to the mind of the body and the environs of the body supplying physical activities to that developing physical entity.

Ye know that it reverts then to the brain of the nervous system, to the solar plexus centre, and then reflexes through its own Mental activity to the physical forces of the still developing body.

Ye know that when such a body has developed, when gestation has been completed and it becomes an entity in itself; because of its centre through which all physical and mental impulse has passed - it is then cut asunder - and yet functions on. Why? How?

These are not merely pathological questions, but mental and spiritual also.

"Diseases of the Tonsils are an effect of pressure and constriction.

Go on up to the Submaxillary Glands, and all of those that you find enlarged and proceeding on to inflammation, and you will find that the obstructed blood which is prevented from entering the head to execute its normal work is busy building Adenoids, Polypi, Nasal thickening's, and sometimes causing Erysipelas, Scarlet fever, Diphtheria, and so on.

All of these Abnormal Growths and Their Effects Follow Obstruction to the normal flow of the fluids of the body.

It matters not where the Obstruction Is, Trouble Follows.

If we do not know this law, we show that we do not know the producing cause. If we do not know this law, we should not proceed to operate.

We may say that we can get more money by using our knife or tweezers for the removal of growths, than we can get otherwise, but I will say that for many years I have made it my business to exhaust every other means of relief before I used the knife. My patient's recovery, is more to me than the dollars.

In my Osteopathic work, my object is to deliver Arterial Blood to its destination, that it may execute all the physiological duties incumbent upon it.

When it has finished the work of construction and repair, then the next step or object that I have in view is to know that it returns to its shop to deliver its waste and be renewed.

It did all it could while it was arterial blood, now it must be returned to the lungs to unite with new substances, receive atmosphere and go through all the qualifying processes necessary to the production of pure blood, and return to the heart that it may deliver Arterial Blood perpetually.

Upon this life depends." - Dr Andrew T. Still, MD, DO, in "Osteopathy Research and Practice", 1910.

> ***"There is no scientific study more vital to man, than the study of his own brain. Our entire view of the universe depends on it."*** *- Francis Crick, in "Thinking about the Brain", The Brain, 1979.*

> *"When the Canadian Dr Michael Persinger a few years ago,* ***chose to stimulate parts of his temporal lobes. He found to his amazement that he experienced God for the first time in his life.*** *I first heard about Dr Persinger's experiment from my colleague, who spotted an account of it in a popular Canadian science magazine. She phoned me right away. "You're not going to believe this. There's a man in Canada who stimulated his temporal lobe and experienced God."* ***Many a patient has told me of a "divine light that illuminates all things", or of an "ultimate truth that lies completely beyond the reach of ordinary minds who are too immersed in the hustle and bustle of daily life to notice the beauty and grandeur of it all."*** *- in "God and the Limbic System", From Phantoms in the Brain, Human Nature and the Architecture of the Mind, 1999.*

The Importance of the Pituitary Gland or "Arch Gland"

"Swedenborg described the intricacies of the cerebral cortex, but he also discovered the perivascular spaces, the foramen of Magendie, and the Cerebrospinal Fluid.

He noted The Importance of the Pituitary Gland or "Arch Gland" in maintaining normal neurological function.

Lastly, in a period where the cortex was given no significant function, Swedenborg developed the idea of somatotopic organization.

It is on the shoulders of such great pioneers as Emanuel Swedenborg that we base our current understanding of the Nervous System.

Swedenborg's groundbreaking neurological discoveries provided vast insight into the complex anatomy and physiology of the brain.

The majority of his publications including: "The Brain", and the "The Cerebrum".

One of Swedenborg's most astute discoveries lies in his description of the miniscule yet complex structure of the neurons within the cortex.

In his paper entitled Tremulationes, he discussed the oscillation of particles through the neural process and claimed that the particles move rhythmically from the brain to the peripheral nerves, and back to the brain through the center of the medulla.

He claimed that the movement was spurred by wave-like palpitations of the brain and by stimuli to the sense organs.

The fibrous, chain-like configuration of the cerebellula that extends through the white matter and medulla to the spinal cord and then travels from the periphery to diverse parts of the body.

He described the means by which a stimulus traveled from each sense organ to the cortex.

He denoted the cortex as the primary control center for the sensory organs, as it innervates actions of the nerves and muscles and enables movement, cognition, imagination, judgment, and will.

Inside the cortex, he claimed, are cerebellula that are configured in accordance to their role in sensation; thus, the cortex is configured concisely so as to receive visual, auditory, olfactory, and gustatory sensations." - in "Emanuel Swedenborg (1688-1772): Pioneer of Neuroanatomy", Child's Nervous System, 6 April 2011.

The Emotional Life and its Reflection in Conscious Sensory and Motor Reactions

"Swedenborg regarded Emotional Life, in its entirety, and its Reflection in Conscious Sensory and Motor Reactions, as the result of cooperation and integration of myriads of cerebellula throughout the cortex of the brain.

Swedenborg had advanced ideas on the 2 Neurone Chain (the neurone theory was put forward in 1891), nevertheless he had views on such an association which would prove to be correct.

Likewise, Swedenborg's views regarding the inner organization of the spinal cord, show that they were amazingly apposite.

He speaks of fibres which arise in the spinal cord and cross each other and fibres which arise from peripheral tissue and terminate at different levels of the spinal cord-remarkable suppositions on the structural basis for integrated functions of the spinal cord!

These extraordinarily important views were first analysed experimentally by Sherrington and are important today in Neurophysiological research.

Swedenborg's methods of treating fundamental problems of the physiology of the brain have a certain similarity to Einstein's way of dealing with the problems of cosmic physics.

The constituent elements in Einstein's world of ideas were according to himself "Bild und Spiel" (Image and Play).

The ability to think in pictures and sort them at will into a pattern.

When Swedenborg wrote his work on the nervous system, the general conception was in a not very well defined way, that the fluid sometimes occurred in parts of the ventricular system.

In accounts of the cerebrospinal fluid, its location and its circulation were not discussed.

In this sphere Swedenborg made his contribution.

In the introduction of "De Cerebro" written between 1740 and 1745, a long citation from previous and contemporary literature occurs. On the basis of these writings, Swedenborg then makes his analysis.

He asserts that "The fourth ventricle which some of our modern anatomists regard as unimportant, is called by Varolius the principal ventricle.

From it, the Spiritus Lymphaticus (Cerebrospinal Fluid), is distributed to almost the whole of the Nervous System.

This fourth ventricle also makes a noble and highly endowed fluid which is distributed more widely along the length of the marrow and particularly the Spinal Cord".

Swedenborg also considers the Cerebrospinal Fluid as an extremely refined fluid, the essence of the supreme organ, the Brain, and within The Seat of the "Spirit of Life".

Swedenborg was the first to observe the central canal of the spinal cord, and the presence therein of Cerebrospinal Fluid.

In the “soul’s membranes” to which those of the brain belong, our perceptions arise because of tremors or “tremulationes” in the nerve fibres.

In his analysis, Swedenborg thought the Hypophysis – Pituitary - resulted from the “convergence” of the brain, and was “the definitive organ for the chemical laboratory which the brain provides.

It receives all the fluid of the brain and transfers the fluid to the blood which it bestows with a special quality vital for all life’s processes.

If therefore the Brain concentrates in this single gland as a definitive goal in its work, the duties fulfilled by the Gland must be magnificent, grand and important for the whole “animal kingdom” and crucial for its well being.

Consequently, the Hypophysis (Pituitary) can be called deservedly Life’s Gland or the Arch Gland (Pituitary Gland).

The function of the gland is to receive, supply and simultaneously secrete fluids.”

As seen, we can imagine that Swedenborg had a foreboding of the existence of hormones.

Swedenborg held the view that “the product of the brain’s secretory activity was an extremely refined lymph which will bestow the blood with its most intimate essence, nature and life”.

Linnaeus assumption of **the Electrical Nature of the Function of Nerves:**

> ***“The Brain is maintained and nourished by essentials for the continuance of life by extremely fine and volatile Electrical Forces, this Vestal fire which ignites in the first humans and shall burn continuously”.***

Linnaeus believed that **Electricity is taken up from the air when breathing and transported by the lungs and circulating blood to the nervous system and cerebellum where it is stored as in a Leyden jar.**

Linnaeus’ premonition of **the Biological Significance of Electrical phenomena,** is proof of a similar clairvoyant intuition, which characterizes Swedenborg.

Not even Swedenborg dreamt of **the Electrical Nature of Nervous Activity**!” - in “Swedenborg, Linnaeus and brain research - and the roles of Gustaf Retzius and Alfred Stroh in the rediscovery of Swedenborg's manuscripts”, Upsala Journal of Medical Science, 2007.

Cerebrospinal System

Cerebrospinal System pertains to that of the Brain and Spinal Cord.

> ***"The Cerebro-Spinal System comprises:***
>
> ***1. Brain (including the medulla oblongata),***
> ***2. Spinal Cord,***
> ***3. Cranial Nerves,***
> ***4. Spinal Nerves,***
> ***5. Ganglia connected with both these classes of Nerves."*** *- in "Gray's Anatomy", 1901.*

The organization of the nervous system with the cerebrospinal:

> ***"The Cerebro-Spinal Axis, is endowed with the chief rule of the animal.***
> ***It is the central power and all others must submit to it.***
> ***It is, moreover, to a large extent, under the will as far as motion is concerned."*** *- in "The Abdominal and Pelvic Brain with Automatic Visceral Ganglia", 1907.*

The Cerebrospinal System is made up of:

1. Cerebrospinal Fluid (CSF)
2. Blood
3. Brain Tissue (including the medulla oblongata)
4. Spinal Cord
5. Cranial Nerves (of these, the most important one are the pneumogastric/vagus, and the 5th cranial nerve)
6. Spinal Nerves
7. Ganglia connected with both these classes of Nerves

> ***"The Cerebrospinal system is comprised of 2 main fluids — Cerebrospinal Fluid (CSF) and Blood — coupled mechanically through the elasticity of nervous and vascular tissues. The vascular network provides a source of excitation through the arterial pressure pulse and a means of volume storage through the collapsible venous network. Two hydraulic lumped-parameter models are developed on this concept with the second model representing a finer level of detail than the first."*** *- in "Medical Engineering & Physics", 2011.*

The cerebral brain is typically regarded as an organ. In the brain the most attention is focused on subcortical areas, the "base of the brain".

With the medulla oblongata regarded as the outstanding feature connecting brain to spinal cord.

The Cerebrospinal system is mechanically linked by the elasticity of the nervous and vascular tissues.

Nerve reflexes are a common and important feature of all nerves, but particularly along the spinal column with its protruding nerve roots and associated plexuses.

The cerebrospinal nerve system with its cerebral brain is the seat of physical consciousness.

Along the cerebrospinal system we find segments. These are cushioned.

Through each segment there arises an impulse or a nerve connection between it and the sympathetic system.

Then, in each center, of the segment where these connect, there are tiny bursa, or a plasm of nerve reaction.

This becomes congested, or slow in its activity to each portion of the system.

For, each organ, each gland of the system, receives impulses through this manner for its activity.

A Major Therapeutic Modality that relates directly to Nerve Function: Cerebrospinal, Sympathetic, and Sensory; is Electro-Therapy.

In addition: **Nutrition (Diet), Mental / Spiritual Focus, along with Manual Therapy (Osteopathic & Chiropractic) is required to Coordinate the Nervous Systems, and provide Drainage.**

The combination of Electro-Therapy and Manual Therapy is essential, both Therapies are based upon the understanding of the workings of the Nervous Systems, and particularly the Cerebrospinal.

For these Treatments work with the natural patterns of nerve impulse, and activity through the Cerebro-Spinal system: brain, spinal cord, nerves, ganglia and plexuses.

Prenatal Causes of Mental Retardation

"Many things that might Cause Mental Retardation, can happen to the developing infant during the prenatal period (that is during the 9 months prior to birth). Nature has provided a wonderful environment for the infant to grow in during its first 9 months.

The infant is well protected within the uterus from temperature changes, physical injury, and many other environmental stresses.

He receives ample nourishment from the mother's blood stream through a special filter and dispensing plant called the placenta, which is embedded in the wall of the uterus. Mother and infant have independent circulatory systems; that is, the mother's blood does not enter the infant or vice versa.

Actually, the mother's and the infant's blood pass through the placenta, which acts as a filtering system, allowing oxygen, foods, vitamins, and other vital products to filter from the mother's blood and enter the infant's blood; waste products from the infant's blood pass back through the placenta into the mother's blood where they are eliminated through the normal processes.

It is important to keep in mind that the infant is growing within the mother, and that whatever happens to her physically may also influence the development of the infant.

It is necessary, therefore, to consider that mental retardation can originate during the prenatal period. This means that the physical health and well-being of the mother during pregnancy is important, since it may affect the growth of the infant, in particular the growth of his delicate nervous system.

Organic Toxins

The development of the infant within the uterus may be affected by illnesses of the mother that produce Organic Toxins.

Organic Toxins are poisons that may be by-products of an infection in the mother; they can pass through the placental filter system and, in a sense, poison the developing infant. In such cases, the sensitive nervous system of the infant may be harmed.

Inadequate Oxygen

Another factor of particular importance is the dependency of the brain upon an ample supply of Oxygen transmitted by way of the circulatory system.

Any condition that interferes with an adequate supply of oxygen to the infant may bring about injury to his nervous system.

Should a pregnant mother be deprived of an adequate oxygen supply, both she and the infant may suffer impairment of their nervous systems.

Nutritional Problems

An anemic condition in the mother may severely deprive the developing infant of necessary nutrition, that is, of the balance of chemicals and vitamins necessary to his normal development, and this can result in permanent damage.

Circulatory Failure

The developing infant may have problems in his own circulatory system that would deprive his brain of ample blood supply.

Such problems may be in the form of a hemorrhage or a blocking of blood vessels by a blood clot.

Among adults, these are commonly spoken of as "strokes", and we are aware of the profound effects they produce, but the effect on a developing infant may be more serious and the injury to the brain permanent.

Postnatal Causes of Mental Retardation

In addition to perinatal causes of mental retardation, there are postnatal causes, i.e., causes which originate after birth.

These causes are many and varied, ranging from direct physical damage to the brain to cases of infection.

Infections of other vital organs, such as the lungs, kidneys, liver, heart, etc., can be transmitted to the brain, and the brain thus become inflamed because of these infections which have arisen elsewhere in the body.

When a vital organ is infected and ceases to function adequately, the amount of toxic, or poisonous, by-products accumulated in the body may be greatly increased and prove very injurious to the sensitive tissue of the central nervous system.

Glandular Dysfunctions

Another cause of mental retardation whose effect is usually seen during the postnatal period is glandular dysfunction.

By glandular dysfunction is meant disease or malfunction of the important endocrine glands, such as the pituitary gland, the thyroid gland, the thymus gland, and the gonads.

Each of these glands is vital to the development and health of the individual, and it is known that the endocrine glandular system is critical to maintaining a proper balance of body function and growth.

Endocrine glands are responsible for secreting vital hormones which are directly associated with growth and maintenance of the vital balance of physical function and metabolism.

Metabolism is the process by which the body utilizes oxygen, chemicals, food products, etc., converting these to energy for physical and mental growth and activity. It is obvious, then, that changes in the function of these glands, particularly during the crucial childhood period when growth is rapid, can have profound effects on the growing child, physically and mentally.

Often glandular dysfunctions are described in terms of hypo- (meaning "too little") or hyper- (meaning "too much").

For example, a condition caused by the pituitary gland might be said to be due to hypopituitarism: hypo- in this case would refer to an under-functioning of the pituitary gland; that is, the gland is not secreting sufficient hormones.

Hyper-pituitarism is the opposite condition, an over-functioning of the pituitary gland wherein there would be too much secretion of hormones.

In either case, the increased or decreased amount of hormone secretion might have very serious effects upon the general growth and health of the body.

There are certain diseases of the pituitary gland which are associated with some forms of mental retardation and changes in physical growth and appearance.

For example, a type of mental retardation associated with hypopituitarism is the Froelich syndrome.

In this condition, there often occur definite physical changes, such as excess accumulation of fat around the lower abdomen, hips, thighs, and breasts; frequently the mature sex characteristics fail to develop.

Mentally, the person is slow and sluggish, and he appears to be disinterested in what is going on around him.

At least one type of mental retardation is known to be due to a poorly functioning thyroid gland.

This is a form of mental retardation called cretinism; it is caused by underfunctioning of the thyroid gland (hypothyroidism).

In this condition, the thyroid gland does not function properly even before birth, with resultant abnormalities in physical and mental development.

In fully developed cases the person is always a dwarf.

The head is large and the legs are often short and bowed, the feet and hands being stumpy and poorly formed.

The mental level of a cretin is usually quite low.

However, the attendant must not make the mistake of believing that all dwarf-like people are cretins and retarded mentally.

There are other conditions in which the person has a dwarf-like appearance, but which have nothing to do with thyroid disease or malfunction and in which mental development is quite normal.

In summary, it can be said that the endocrine glandular system is vital to the regulation of general and specific growth as well as mental development.

An imbalance or malfunction of any or all of the glands which make up this system can disrupt the development of the child.

Here again, medical research has made great strides in discovering new causes and effects of endocrine function.

Treatment of certain diseases of the endocrine glands is commonplace.

Even so, there is much to learn, and as more is learned about the causes of mental retardation, it may be found that the part played by the Endocrine Glands is even more complex than now known.” - in “Understanding the Mentally Retarded”, 1965.

Wrong Diet, Wrong Thinking And Wrong Living Can Cause Disturbing An Upheaval In The entire Endocrine Glandular System

“No part of your body comes closer to being the real you than that intimately related group of glands known as the endocrines.

Louis Bromlield, the famous American novelist, recently told a group of young writers: “Glands Make Characters!”

The writers who deal in human character as their stock in trade know that each of us is the sum and substance of his glands.

Healthy glands make normal, healthy, long-lived characters.

Sluggish, overactive or diseased glands create ailing bodies and deeply hidden complexes. In other words: "Glands Make the Man."

Wrong Diet, Wrong Thinking And Wrong Living, Can Cause so Disturbing an Upheaval In The Entire Endocrine Glandular System; That Health, Personality and even Physical Appearance Are Drastically Affected, sometimes being altered so greatly as to bear little resemblance to the former status.

When the Pancreas, a member of the endocrine family, ceases to function, Diabetes is the Result; an overactive thyroid gland causes flare-ups of excessive "temperament", while too little thyroid secretion slows down the brain.

Sleep, too, falls within the province of the pituitary gland.

Too little hormone secretion from this gland will cause too much sleep.

In later years, a degenerating pituitary gland; may cause older persons to doze off at any time or in any place.

This Gland, the Pituitary, Can Be Damaged by an Inadequate, Unbalanced Diet.

Dr Ervin P. Vollmer, eminent American biologist, declares that Chronic Partial Starvation of the human body, Because of Improper Diet Leads to a Fatal Disease, resembling that caused by removal of the pituitary gland.

Citing cases wherein Soldiers of World War I, Died Suddenly, From No Other Ailment than the Impairment of the Pituitary Gland.

He advances the theory that persons who have been existing on an insufficient, unbalanced diet suffer from serious weakness of the pituitary gland, hence from weakness of all the other key endocrine glands.

Wholesale Partial Starvation Is Ruining the Endocrine Glands, especially the pituitary, causing a diseased condition of the body.

> ***"This great depth and persistence of effect of chronic malnutrition can be understood, I think, only in the light of some recently acquired knowledge of the endocrines. Sir Patrick Hehir during that siege observed that sometimes emaciated but otherwise unharmed soldiers were found dead in their bunks. It is likely that they died of hypopituitary cachexia. That malnutrition affects the endocrine organs is well known. C. M. Jackson in 1925 assembled considerable evidence that, in general, chronic inanition leads to endocrine atrophy. Treatment of people suffering from Malnutrition, with Hormones, supplementary to adequate diet, may well result in more Rapid and Complete Recovery. Hormone treatment may be especially important for children, not only to save their lives but also to prevent stunting and dystrophic growth. Chorionic gonadotropin and sex hormones, as well as a number of pituitary extracts, have been used clinically with marked success in stimulating growth in retarded children."*** *- Dr Ervin P. Vollmer, in "Relation of Hypopituitarism and Starvation", Nature, 19 June 1943.*

One of the Endocrine Glands is the Thyroid, located in the neck immediately in front of the windpipe.

This small gland manufactures a hormone that is a chemical regulator distributed by the blood to all parts of the body.

A Complete Lack of Thyroid Secretion In The Blood Results in Imbecility.

The blood of normal persons is found to contain the proper amount of the Thyroid Hormone, whereas too much of this secretion often is found in the blood of persons who are continually excited, nervous, easily irritated and always worrying.

This Hormone (Thyroxine), contains Iodine as one of its constituents.

Whenever an ordinarily alert person in normal health gradually becomes less active, while the face takes on a dull, stupid expression and the skin grows puffy, there is good reason to suspect that the thyroid gland has slowed down in its production of Thyroxine.

Especially are these symptoms indicative of an underactive Thyroid if he also becomes Anaemic, is always tired, has flabby muscles and has put on extra pounds of body weight.

And along with these physical signs appear changes in his mental activity: the thoughts become confused, he suffers black moods of depression and is distrustful of everybody and thoroughly dissatisfied with life.

Usually a person exhibiting these symptoms will respond rather quickly to doses of an Iodine-containing hormone that approximates the body's own thyroid secretion.

So important is the influence exerted by the Thyroid Gland upon our entire body, including all other Endocrine Glands, that once every hour our entire volume of blood must pass through this gland to become re-charged with the thyroid hormone secretion.

When the Thyroid Gland becomes sluggish, refusing to produce its normal quota of secretion, it swells into the diseased condition known as goiter.

Sometimes the swollen gland can be seen, but in other cases it can only be detected by a skilled clinician.

Goiter is especially prevalent among women; from 5% to 8% of them between the ages of 30 and 50 suffer to some degree from Hypothyroidism (Sluggish Thyroid).

Typical symptoms are:

1. Palpitation of the Heart.
2. Extreme Exhaustion after the slightest exertion.
3. Severe Headaches.
4. Chronic Fatigue.
5. Increased Weight (despite dieting).
6. Mental Depression.

Adequate Thyroid Secretion is necessary in the Bloodstream; for Waste Matter to be Processed for Elimination. An Underactive Thyroid Gland Contributes also to the Accumulation of Noxious Substances in the Body, a condition which in itself is a Prime Factor in Bringing on Diseases of the Various Organs. Everything we think, do, or eat has its effect upon the core of our existence: Our Endocrine Glandular System." - Delord Kordel, SC.D, in "Health Through Nutrition", 1971.

Chapter 30

Intestinal Toxaemia, Or Alimentary Auto-Intoxication

"In demonstrating the effects of the Toxins and Ptomains (foul-smelling nitrogenous organic bases substances, produced by the action of bacteria during putrefaction of animal or plant protein, and including some which are poisonous) produced by abnormal bacterial development in the Intestine, bacteriologists have opened up a new and Highly Important Chapter in the Etiology of Disease.

"The Products of Bacteria Are More Important than the Microbes Themselves." *- JAMA, 12 September 1896.*

Surgeons under the leadership of Arbuthnot Lane have undertaken the Cure of a long list of chronic disorders by short-circuiting or removing the Colon.

The fact that both **internists and surgeons now combat various Chronic Disorders by measures the general purpose, and effects of which are to lessen the absorption of toxic substances from the Intestine,** is powerful confirmation of the soundness of the doctrine of Intestinal Toxemia as expounded by Bouchard, Metchnikoff, Tissier, and a long list of other well-known investigators.

There can be no doubt that **the ravages of disease have been checked and most distressing symptoms mitigated in thousands of cases through the use of means for increasing Intestinal Activity.**

Valuable Curative Means

It is a notorious fact that most of those who have submitted themselves to short-circuiting, and even more radical surgical operations for relief of Intestinal Stasis, sooner or later, usually within a year after the operation, find themselves suffering from the same distressing symptoms for the relief of which they consented to submit themselves to a mutilating surgical procedure. Especial prominence is given to the "Milk Regime" and the "Fruit Regime", because these 2 have been found most efficient.

Various other useful and efficient regimes have been worked out and are occasionally used.

A Milk Diet has been recognized as a therapeutic measure, and employed in the treatment of various acute and chronic maladies since the time of Hippocrates. The same may be said in relation to the grape and other fruit cures, which from the most ancient times have been more or less in vogue, especially in certain countries.

Thanks to the labors of Pavlov, Pasteur, Tissier, Metchnikoff and various other physiologists and bacteriologists there has been developed within recent years the necessary scientific data upon which to base a sound rationally for the "Milk regime", and "Fruit regime" and various other special regimes, and to perfect exact and efficient methods for the employment of these physiologic and remarkably efficient methods of dealing with a class of disorders which have baffled the most persevering efforts alike of internists and surgeons.

While useful in other ways, both the Milk regime and the Fruit regime are chiefly valuable as means for changing the Intestinal Flora.

The Milk Diet, and the Fruit Diet, these Physiologic and often Brilliantly Successful Remedies.

Bacterial Toxins and Pigments

Some Toxins possess a still higher degree of Virulence.

A Streptococcus studied by Marmormek possessed such powerful Toxicity that a single grain was capable of killing 7 Billion rabbits.

Pigments of various sorts are produced by Certain Species of Bacteria.

Some of These Are Highly Toxic. Deposits of these pigments in the skin produce so-called "liver spots", dinginess and bad complexion.

One of the most common of these is Brenzcatechin (Catechol), which according to Combe is formed in the intestine.

The Influence of Food Upon Bacteria

One of the most notable facts is that **most bacteria refuse to grow in the presence of Acids. This is particularly true of disease-producing bacteria.**

A few bacteria are able to resist Acids.

These are the organisms that give rise to fermentations, such as the souring of milk and the fermentation of solutions of sugar in the formation of vinegar.

The products of bacterial work are always poisonous to the organism by which they are produced. This fact, limits the degree of Acidity that can be produced by any particular organism. The B. Bulgaricus is remarkable in possessing greater resistance to Acids than any other micro-organism known.

It will endure a concentration of Acids as high as 4%, whereas few other organisms can resist a concentration much greater than 1%.

This organism will continue to grow in a solution that contains 30 times the amount of Acid which will stop the growth of Welch's bacillus, an organism which produces foul gases in the Intestine.

It is chiefly because of its acid-forming activity that the B. Bulgaricus is able to render special service in efforts to change the intestinal flora.

Many bacteria thrive best when supplied with a culture media containing an abundance of nitrogenous substances in some form. These organisms in turn give rise to a destructive change that in organic substances is commonly known as putrefaction.

Instead of Acids, this class of bacteria produce:

1. Ammonia,
2. Ptomains (any of various organic bases formed by the action of putrefactive bacteria on nitrogenous matter and including some which are poisonous compare leukomaine),
3. Skatol,
4. Indol,
5. Phenol (carbolic acid), and other
6. Highly poisonous substances, among which are
7. Tox-albumins, which closely resemble and **sometimes exceed in virulence the venoms of the most poisonous reptiles.**

In general, proteins of animal origin are attacked twice as readily by putrefactive organisms as are proteins of vegetable origin.

This is of great importance and agrees with the observation made by Combe many years ago, that Brenzcatechin, a highly poisonous pigment that causes pigmentation of the skin (liver spots), is produced only by the action of bacteria upon animal proteid.

The decomposition of organic matter is not a simple process.

There are 2 classes of substances, those which ferment, carbohydrates, and those which decay, proteids.

The 2 classes of bacteria, those that feed on sugar, causing fermentation, and those that decompose proteid, causing decay, work together; but the **fermentation process starts first, because this class of organisms grows most rapidly. Even in meat there is sufficient sugar to start fermentation process, and so the first symptom of decay in meat is souring.**

After the sugar is used up, the acids are destroyed by germs that feed on them. At the same time, process of putrefaction is slowly starting through the growth of the bacteria that feed on protein.

Soon the acids disappear, ammonia takes their place, and the odours of putrefaction appear.

Vegetable foods contain sugars, starches and dextrines, substances which ferment, and so when undergoing decay do not in general give rise to the obnoxious and poisonous gases and other substances which accompany the decay of animal tissues.

Milk likewise ferments because of the large amount of sugar which it contains.

Eggs and meat do not ferment but **undergo putrefaction giving rise to highly offensive and poisonous products.** This is because of the absence of sugar.

Eggs or meat place in a strong solution of sugar will not decay.

Bacteria Are Everywhere

It is difficult to find a spot on the earth's surface where bacteria do not abound.

They are most abundant in the air of crowded cities, but also are found in the air of mid-ocean.

The air of high mountain tops is comparatively free from bacteria as also the air of the Artic regions.

Even the sea water near the poles contains few microbes.

Bacteria grow with great rapidity in the warm moist climate of the tropics, but fortunately their development in hot countries is greatly hindered by the disinfecting effects of the actinic rays of the tropical sun.

The Intestinal Flora

The Entire Alimentary Tract Harbours Multitudes of Bacteria.

The saliva swarms with bacteria which are ready to develop enormously if favourable conditions are supplied, and may attack the teeth and the gums, as seen in dental decay and Pyorrhea.

So long as the blood is maintained in a state of high resistance the saliva protects the mouth and the teeth by inhibiting or hindering the growth of bacteria; but when the blood becomes deteriorated, the saliva loses its protective power, the mouth germs become more numerous and more virulent, the tongue becomes coated and the breath foul, and the teeth become coated with a viscid mucus and finally show evidence of decay.

Roger and others have isolated many different species of bacteria from the saliva. **The cavities of the nose and throat likewise harbour many species of bacteria, not only the common pus-forming microbes, Streptococci and Staphylococci, but the dangerous micro-organisms of Pneumonia, Diphtheria, and Meningitis.**

Many of the species of bacteria found in the mouth are also found in the stomach. Fortunately the stomach is protected by the gastric juice, which is a powerful disinfectant so long as it contains the normal amount of hydrochloric acid. **The normal stomach always contains enough gastric acid to protect it.**

The diseased stomach, however, often lacks this important means of defence. When this is the case, the bacteria of the mouth easily pass through the stomach and establish themselves in the Intestine, where they find conditions more favourable for their growth and development, especially in the Colon.

Bacteria are so constantly present everywhere that the wonder is, not that the intestine becomes infected, but that the body is not more quickly and more often overwhelmed by these parasitic enemies of life.

The air we breathe, often the water we drink and the food we eat, swarm with bacteria or their spores. **Through the medium of unwholesome food and various errors and accidents, the alimentary canal becomes infected with putrefactive organisms and other poison-forming and disease-producing microbes.**

The most virulent and active of these are naturally introduced in connection with animal proteid.

The Development of Toxemia Is Especially Favoured by Habitual Constipation. When delay occurs in the movement of the intestinal contents, carbohydrates are entirely absorbed; as a result, the acid-forming bacteria which normally protect the intestine against the wild or poison-forming bacteria are starved, and soon die. Cooked food yields much more readily to bacterial action than does uncooked food.

The fact that in many cases of extreme Constipation, the fecal matters have very little odour is not evidence of the absence of putrefaction, but rather is evidence that the putrescible material has been exhausted and the putrefaction products absorbed.

It is only necessary in such cases to give the patient a **laxative to find in the loathsome smelling stools that result abundant evidence of the active putrefaction taking place in the upper portion of the colon.**

The introduction of "wild" bacteria into the intestinal tract alone will not give rise to chronic Intestinal Toxemia.

The protective forces of the body are capable of dealing with infections of this kind so long as the bodily functions remain normal.

In a person with normal secretions and with a colon that empties itself with the normal intestinal rhythm, evacuating its content 3 times a day, wild bacteria would not be able to obtain a foothold.

The few bacteria introduced, if not destroyed in the stomach or captured by the myriads of leukocytes that they would meet during transit of the alimentary tract, would be dismissed from the body before they had an opportunity to develop in any considerable numbers by colonizing in the folds or pouches of the colon.

The poison-forming organisms always find in the colon an abundance of protein the form of mucus.

In the residues of internal secretions, as well as unabsorbed food proteins, these organisms grow luxuriantly, so that in the course of years a considerable variety of putrefactive and other mischief-making organisms are accumulated.

Every new infection makes a new contribution of injurious organisms that become domiciled in the intestine, and continually flood the tissues with their virulent products, some of which are highly active in most minute quantities.

According to Stewart J. Spence:

1. **Urobilin (formed by the putrefaction of bile) must be included with,**
2. **Skatol,**
3. **Indol,**
4. **Phenol,**
5. **Cresol, and**
6. **Other Poisonous Products of Intestinal Putrefaction.**

Intestinal Bacteria

The intestine is invaded by acid-forming bacteria within a few hours after birth.

Metchnikoff has long maintained that the colon bacilli are not helpful, but in the highest degree harmful, producing, through their pernicious influence, hardening of the arteries, premature old age, and numerous degenerative disorders of the heart, liver, kidneys, and other vital organs.

Defensive Action of the Liver

The liver combats bacteria by destroying and eliminating them.

It also destroys to some extent the bacterial poisons that get through the mucous membrane.

Certain poisons such as skatol, indol, and phenol, are detoxicated by combination with sulphuric or acetic acid.

Glycuronic acid is also formed from sugar or glycogen, and is used for the same purpose.

It is doubtless for this reason that a good store of glycogen in the liver is essential to insure its efficient functioning as a poison-destroying organ. Glycogen is formed from carbohydrates.

A liberal supply of carbohydrates is thus essential to maintain body resistance.

Roger maintained that **the bile modifies poison-forming bacteria so that they are unable to produce toxins.**

It is also known that the **bile prevents the growth of many harmful bacteria.**

It was noted by Roger, that the **bile increases the toxicity of bacterial poisons which have already been produced.**

Years ago, Roger, pupil of Bouchard, showed that **the liver cells destroy poisons brought to it in the blood. Some poisons are actually burned up by oxidation; others are detoxicated and rendered harmless.**

Lauder Brunton showed that **the liver destroys the toxin of diphtheria.**

Other Defensive Means

Other poison-destroying organs are the thyroid gland, the lymphatic glands, and especially the suprarenal capsules.

An important special function of the last named glands is to destroy certain poisonous pigments which are produced in the putrefaction of animal proteins in the intestine. The Kidneys, and the Skin Eliminate Germs probably in much greater numbers than is generally supposed.

It is on this account that attention must be given to the excretions of the skin and the kidneys, in cases of typhoid fever, as well as the stools to prevent infection.

The Ileocecal Valve

Nature has provided a remarkable means of defence against the bacteria and bacterial poisons developed in the food residues found in the colon by placing at the junction of the small intestine with the colon a check valve so ingeniously contrived that nothing that has once passed into the colon can get back into the small intestine.

Even flatus, as well as solids and liquids, is effectively confined to the colon.

This is necessary for the reason that **the colon is better prepared to deal with germs and their poisons than is the small intestine.**

Absorption from the colon takes p**lace very** slowly.

Not more than 1/20 as much fluid is absorbed from the colon as from the small intestine.

Adolph of Schimdt called attention years ago to the relation of **ileac stasis to intestinal toxemia.**

Schmidt remarked that putrefaction in the colon did not give rise to the presence of indican in the urine in any considerable quantity, and that **the presence of much indican in the urine was due to the reflux of putrefactive material from the colon into the small intestine through an incompetent ileocecal valve.**

The study of the clinical histories of some hundreds of cases in which Dr. J. and T. Case has proved the ileocecal valve to be incompetent by x-ray examination has convinced me of the accuracy of Schmidt's observation, which is all the more remarkable, since at the time his statement was made the x-ray means of diagnosis of incompetency of the ileocecal valve had not yet been developed.

It seems probable that in practically all cases of intense Intestinal Toxemia, the ileocecal valve is incompetent.

The Influence of Toxins Upon Living Cells

Alexis Carrel in the Rockefeller Institute, made a remarkable experiment that clearly demonstrates the Influence of Toxins upon Living Cells.

Carrel demonstrated that living tissue of various kinds could be made to grow in a suitable medium.

He observed, however, that after a few days the rate of growth was slowed, and ceased at the end of a couple of weeks.

His experiment would have ended here but for the interesting discovery that by changing the nutrient media, so as to wash away the poisons which the tissues had produced, he was able to extend this period of growth for another 2 weeks. By renewing the nutrient media, and thus cleansing the growing tissue of its waste products every 14 days, Carrel was able to extend his remarkable experiments for many weeks.

The rapid rate of growth gradually diminished, however, until finally growth ceased and the death of the living cells terminated the experiment.

This is exactly what takes place in the body as the result of the poisoning of the living cells with the poisons absorbed from the intestine. So long as the body is able to keep itself free from poisons the vitality of its tissues is maintained; but when the liver, kidneys and other excretory organs begin to fail, poisons accumulate, degenerations begin, senile changes make their appearance, and death ends the scene.

The influence of the poisoning-destroying glands in protecting the body was well demonstrated by a modification of an experiment, in which Carrel applied **the juice of thyroid gland or spleen of a very young animal to the growing tissue. The effect was most astounding.**

The rate of growth was stimulated to such a degree that the tissue increased in 24 hours to 40 times its original bulk.

Carrel was thus enabled by the use of thyroid juice, not only to prevent the degenerative influence of the tissue poisons shown in the gradual slowing of growth and finally death, but to produce an opposite effect; increasing the rate of growth and apparently making it possible to continue his experiment in the artificial growing of living tissues for an indefinite period.

No one who has had the privilege of witnessing Carrel's wonderful experiments at the Rockefeller Institute can possibly doubt the Pernicious Influence of Toxins Upon Growth and Activity.

Alimentary Toxemia

In a symposium on the subject of Intestinal Toxemia, or Alimentary Toxemia, a discussion that occupied several sessions of the Royal Society of Medicine of Great Britain in 1913, some 60 of the leading physicians presented at length the various phases of this important question.

As the best means of giving the reader a correct idea of the present concensus of authoritative medical opinion on this subject we here present a concise summary of the views expressed by the leading speakers in this exhaustive discussion in regard to the **poisons produced in the intestine and their effects upon the human body.**

W. E. Dixon, Professor of Materia Medica and Pharmacology, King's College, London, enumerated the poisons that are produced in the intestine, chiefly in the colon.

Intestinal Toxins

Amino-acids resulting from digestion are non-poisonous, but changes produced in them by putrefactive bacteria produce highly poisonous substances.

Ammonia, always present with putrefaction, produces disease of the liver.

In experiments upon animals, **ammonia caused degeneration and hardening of the liver. Many of the products of digestion are converted into poisons by putrefactive bacteria.**

Tyrosine (an amino-acid, a product of digestion) is converted into tyramine, a highly poisonous substance.

Tryptophane and arginine (amino-acids) are converted into poisons, Indol and Skatol.

Sepsin, a poison so virulent that a minute dose administered to a large dog caused death in a few hours, is found in putrid meat and is always found in the colons of meat eaters.

Barger and Walpole, demonstrated 2 pressure-raising poisons produced from Sepsin by putrefaction.

Tyramine is found in old cheese, in which it is produced by bacterial action. It is also produced in the colon.

Pressure Raising Poisons Cause Hardening of the Arteries

In recent years it has been shown by different workers in our Cambridge Laboratory that any drug that has the power of considerably raising blood-pressure will, when injected into the circulation of healthy animals, bring about degeneration of the middle coat of the arteries.

Generally about 6 injections must be administered before any changes are observed, and the effects occur alike in young and middle-aged animals.

It has been shown that digitalis, squill, apocynum, barium, lead, adrenalin, nicotine, and even the inhalation of tobacco smoke, will all bring about these changes.

Poisons that cause rise of blood-pressure are produced in the intestine.

Bain, found these poisons present in the blood of persons who have high blood-pressure, showing that they are retained in the body instead of being destroyed or eliminated.

Experiments have shown that a vegetable diet reduces the amount of these poisons in the urine.

Influence of Diet on Intestinal Flora

Carrots may be advantageously used in a regime that has for its purpose the changing of Intestinal Flora. Bertrand found that when rabbits were fed on potatoes, the urine contained indican, while the urine was free from indican when the animals were fed on carrots. The colon bacilli were more numerous in the colons of potato-fed rabbits. Bertrand thought that **the greater amount of putrefaction in the potato-fed rabbits was due to the fact that there was less acid fermentation because less sugar was present.**

I was also noted that starch-digesting bacteria were present in smaller quantities in the stools of potato-fed rabbits.

This experiment shows the value of raw starch as found in green vegetables in reforming the Intestinal Flora.

Stasis Causes Toxemia & Gall Stones

Mantle, Consulting Physician to Halifax Royal Infirmary, agreed with Sir Bertrand Dawson in the belief that **colitis, as well as gastritis and catarrh of the duodenum, may be due to infection from the vermiform appendix, and that catarrhal inflammation of the appendix and the colon may be carried upward to the stomach and duodenum. The gall-bladder may be infected from either direction. The most common origin of Intestinal Toxemia is Catarrhal Inflammation of the Colon due to Chronic Constipation. That many people seem to be well, even though they suffer from Constipation, is due to the fact that the natural defences of the body are in their cases not yet broken down.**

Toxins do not readily find their way into the circulation, until after the mucous membrane becomes abraded, or ulcerated, as the result of Chronic Infection.

Fatigue Poisons Produced in the Intestines

> ***"The Bacillus coli seems to have a special power of producing fatigue Toxins, and many people in whose intestines it exists in great abundance suffer from constant weariness and a feeling of fatigue."*** *- Sir Lauder Bronton*

Joint Symptoms Due to Intestinal Toxemia

> ***"Rheumatoid Arthritis, and other joint symptoms may arise from poisons absorbed from the intestinal mucous membrane. The joints are especially susceptible to certain poisons."*** *- Dr Mantle*

Intestinal Poisons and High Blood-Pressure

> *"The diamines, discovered by Barger and Dale to arise from the decomposition of histidine, another product of protein breakdown, afford another promising field of study. There is a very wide-spread belief that* ***Alimentary Toxemia is an important cause of the rise of blood-pressure in later life, and here we have an example of the production of definite pressor substances by Intestinal Putrefaction.*** *But note that here, too,* ***there is an abnormal Intestinal Microbe at work, the Bacillus Aminophilus Intestinalis,*** *which supports my general contention. The poisonous substances formed in the intestine do not give rise to antibodies, as do certain other poisonous substances. These simple chemical substances, indol, phenol, etc., are neutralized by substances found in the body, protein sulphates, glycuronic acid, bile acids, glycogen, etc.* ***The only way to secure immunity is to create a normal intestinal flora.***
>
> ***Intestinal Toxemia can not be combated by Vaccines for the reason that the organisms that produce the poisons are outside of the tissues and hence can not be reached by the antigens."*** *- Dr Langdon Brown, Physician to St. Bartholomew's Hospital.*

> ***“There are few phases of Cardio-Vascular trouble with which disorder of some part of the alimentary tract is not causatively associated.***
> ***The Great Majority of such Affections Are Associated with an Alimentary Toxemia which presents certain easily recognizable features. Shortly before he retired from practice at Plombieres (Hydropathic Sanatorium), Dr Bottentuit informed me that practically all subjects of long-standing colitis presented myocardial weakness, generally with dilatation.*** *A. E. Garrod argues that the Transient Joint Manifestations accompanying* ***Erythemas, Purpura, and Urticaria are, like the cutaneous changes, toxic. Reference may be made here to the possibility that changes in the suprarenals due to Alimentary Toxemia may be instrumental in the production of Arteriosclerosis. It has long been an article of faith that continued indiscretions in diet and over-eating cause chronic arterial and renal disease; more recently it has been noted that the suprarenals are large in Granular Kidney and Arteriosclerosis, and it might again be suggested that indol and other bodies absorbed from the intestine cause hypertrophy of the suprarenal medulla (with increased secretion of adrenalin), and so high blood-pressure, and ultimately Arteriosclerosis and Granular Kidney.”*** *- Dr Beezly Thorne, Kt. of Grace, Order of St. John of Jerusalem*

Arteriosclerosis Caused by Intestinal Poisons

> ***“Metchnikoff, Herter and others have shown that indol and skatol produced by the Colon Bacillus cause atheroma or degeneration of the blood-vessels, especially of the large aorta near the heart. Unquestionably these substances are highly toxic, as the effects observed by Metchnikoff were produced by very small doses of indol*** *given daily during a few months. The indol derivatives are all relatively innocuous compared with other substances found in the alimentary canal.” - Dr E. Mellanby, Lecturer on Physiology, King’s College for Women*

Dr Mellanby mentions especially the powerful poisons, para-hydroxyphenylethylamine (the amine of tyrosine), iso-amylamine (the amine of leucine), and betthatisnotdiokine-imidazolethylamine (the amine of histidine).

> ***“In many subjects of Intestinal Stasis, I find marked radiographic evidence of atheroma of the aorta at an unusually early age - another instance of the havoc wrought on the tissues by Intestinal Poisons.”*** *- Dr Alfred C. Jordan, eminent roentgenologist*

Intestinal Toxemia and Insanity

Dr J. F. Briscoe, in discussing the subject from the standpoint of the specialist in mental diseases, remarked:

> *"**Who Has Not Seen a Prodigious Evacuation of the Bowels, at the hands of the physician Terminate a Case of Insanity,** and on the other hand, has not observed the skill of the surgeon unfold the mechanical obstruction that has led to the deadly consequences of Intestinal Putrefaction. It is obvious that Constipation is only a link in the series of causes and consequences arising from the Disturbed Abdominal Viscera, and on the mental side encourages and accentuates such symptoms as apathy, mania, suicide; while on the bodily side it produces very marked emaciation, rheumatism, cachexia (wasting syndrome), and a long string of diseases."*
>
> ***"The mental effect of many patients of prolonged Intestinal Toxemia is such as to Make them almost Demented, and I believe that if many of our Asylums were invaded by a good, sound clinical physician who would approach the subject without preconceived idea, in many cases supposed to by hopeless, the melancholia and hypochondria would yield to common-sense treatment and reduce the number of Insane people."*** *- Dr Lennox Wainwright, Hon. Physician to St. Michael's Medical Aid, Physician to the Society for the Prevention of Cruelty to Children*

The Tongue an Index to the State of the Colon

The toilette of the Digestive System has always been a difficult problem of solution.

The state of the tongue may be a good index of Intestinal Health, and a foul condition of the breath speaks volumes of what may be suspected lower down, although the patient may not be Constipated.

The Cause of Arthritis and Gout

> ***"Diseases of the Locomotor System not uncommonly find their origin in Chronic Intestinal Auto-Intoxication. It is a more than probable cause in some cases of Rheumatoid Arthritis, and of prime importance in Gout, especially of the acute type. In quite a number of cases I have seen efficient Lavage of the Colon cut short an attack of this disease where previously all the more usual methods of treatment had failed to bring or maintain relief. Fibrositis, too, may find its origin in absorption of Toxins from the digestive apparatus, and this is now recognized by many authorities as a direct cause of this painful and troublesome affection."*** *- Dr H. Douglas Wilson*

Tetany, Rheumatoid Arthritis and Myxedema Caused by Intestinal Toxemia

"On very good grounds, Tetany is thought by many to be produced by Toxins generated in the Alimentary Canal. In Rheumatoid Arthritis, we have a condition probably in many cases due to Alimentary Intoxication; in this condition, overgrowth of the thyroid is apt to occur, and tetany, a symptom of ineffective functioning of the thyroid gland, is also found. Moreover, Rheumatoid Arthritis is occasionally distinctly benefited by the administration of thyroid extract. The last 3 cases of myxedema (swelling of the skin), that I have had under observation have all shown, together with severe Oral Sepsis and very offensive motions, Anemia of the pernicious form that Dr William Hunter has for so many years ascribed to Lesions in the Alimentary Tract. If the thyroid undergoes enlargement to combat Toxemia, it is reasonable to suppose that relieving it of part of its burden may cause a simple goiter to shrink; this, of course, cannot be expected if adenomata or cysts are present." *- Dr Frederick Langmead*

"We seem drawn to the conclusion that it is not the organization of the Great Intestine that has failed, but that our modern dietary sets a task for which it is not adapted." *- Prof. Arthur Keith, Hunterian Professor, Royal College of Surgeons of England, the eminent English anatomist*

Intestinal Stasis

"I was particularly interested in Rowell's reference to cases of Intestinal Stasis associated with thyroid enlargement, and in which the gland diminished in size on removal of the stasis, *in one case as the result of administration of liquid paraffin (laxative).* ***I believe strongly in the importance of diminishing the intake of animals proteids,*** *and there is a great deal of truth in Professor Keith's contention that* ***the colon is more of a misused than a useless structure, owing to the extraordinary change that has taken place in the diet of man in civilized countries. I agree with Metchnikoff in thinking that the simpler food of uncivilized races may be best, and that it would be true progress to abandon much of the modern cuisine and to go back to the simple dishes of our forefathers. Excessive cleavage of animal proteids is harmful.*** *In my experience, Intestinal Stasis is much commoner in private than in hospital practice, and I attribute this fact to injudicious diet on the part of the better classes." - Dr Murray Leslie, Senior Physician to the Prince of Wales Hospital*

Toxemia the Cause of Hepatism

Mummery, Surgeon to St. Mark's Hospital referred to **Intestinal Toxemia the symptoms resulting when the function of the liver fails** (hepatism), as also the symptoms of uremia which occur when the kidneys become inefficient.

He remarked:

> *"Some of the most interesting and important* ***Cases of Auto-Toxemia are those in which there are associated joint lesions of the nature of semi-acute or Chronic Arthritis. I believe that many of the cases of crippling Arthritis that we see from time to time are due to poisons formed in the large bowel. I have seen several cases in which Arthritis, both of the chronic and semi-acute variety, was associated with Stasis and Toxemia."***

Sir Bertrand Dawson, MD, Physician in Ordinary to H.M. the King, Physician to the London Hospital, a leading physician of Great Britain said:

> ***"The terms "Alimentary Toxemia" and "Intestinal Stasis", they convey to our minds a definite clinical picture. The sallow, dirty complexion, the inelastic skin, the dusky lips and nails, the dirty tongue, evil-smelling breath, constant abdominal discomfort of one kind and another, the doughy inelastic abdomen, cold extremities, the physical and mental depression, are among the prominent features. That such a condition may be produced by Colon Block and Stasis, is, I think, clear."***

Dr A. F. Hertz, Physician of Nervous Diseases to Guy's Hospital, gave as the classical symptoms of **Intestinal Toxemia, "extreme emaciation, extensive pigmentation, evil-smelling sweat, and cold extremities."**

The Symptom Complex of Intestinal Toxemia

Arbuthnot Lane, eminent surgeon of Guy's Hospital, attributes to Intestinal Toxemia, inflammation of bile ducts and of the gall-bladder, gall-stones, inflammation of the pancreas, duodenal spasm of the pylorus, cirrhosis of the liver and Bright's Disease (Nephritis, inflammation of the kidneys).

Lane even goes so far as to say that **"the gynecologists may also be regarded as a product of Intestinal Stasis."**

He enumerates the following conditions as due to Intestinal Toxemia:

1. "Wrinkles.
2. Atrophy of the skin.
3. Pigmentation of the skin.

4. Browning of the eyelids, also the skin about the eyes, the axillae, the abdomen.
5. Cyanosis.
6. Coldness of the hands and feet.
7. Sweating of the hands and feet.
8. Livid skin.
9. Roughness and Dryness of the skin.
10. Wasting of the muscles.
11. General muscular weakness.
12. Curvature of the spine.
13. Wasting of the abdominal muscles.
14. Prolapse of the viscera.
15. Weakness of the heart.
16. Degeneration of the aorta.
17. Dilated heart.
18. Melancholia.
19. Imbecility.
20. Headache.
21. Symptoms resembling brain tumour.
22. Epilepsy.
23. Diseased conditions of the mammary gland - a nodulated condition.
24. Induration.
25. Cystic degeneration and later cancer – goiter.
26. Adenoids.
27. Enlarged tonsils - the result of lowered vital resistance.
28. Pyorrhoea.
29. Endometritis.
30. Uterine cancer.
31. Various Disease of the Eye, and Baldness.
32. Increased growth of the fine hairs covering the general surface of the body, 33. Tuberculosis.
34. Rheumatoid Arthritis.
35. Still's Disease (Inflammatory Arthritis).” - Dr Arbuthnot Lane, MD, Surgeon

Skin Diseases Due to Intestinal Toxemia

“There are many Skin Eruptions:

1. Psoriasis.
2. Lichen.
3. Planus.
4. Pemphigus.
5. Scleroderma.

6. **Pityriasis rosea.**
7. **Alopecia areata.**
8. **Lupus erythematosus.**
9. **And Others.**

Which certainly definite entities, and almost obviously due to some specific cause.

There are circumstances which rendered it very improbable that these eruptions are due to the local presence of micro-organisms, and the only alternative seems to be to regard them as due to toxins.

The most likely source of such toxins seemed to be the alimentary canal.

One thing that has been learned from the experimental work in regard to the erythemas and urticarias due to food poisons and drug poisons was the infinitesimal amount of poison which might suffice to cause an eruption; and it seemed probable that if these eruptions were due to toxins, they were toxins that were too small in quantity to be measurable by ordinary chemical methods." - Dr H. G. Adamson, Physician in Charge of Skin Department to St. Bartholomew's Hospital

> ***"A too generous diet often plays an important part in some cases, especially in Eczema, Acne and Psoriasis, and a change to a more or less vegetarian one will often bring about a cure.***
>
> ***In some patients a diet of rice and water, in others a pure milk diet, will often clear up an old-standing and very obstinate skin lesion, especially if of an inflammatory or irritable type.***
>
> ***The Treatment of a Large Number of General Skin Eruptions Resolves itself into the Treatment of Chronic Constipation.***
>
> ***It is not the frequency of evacuation that is of importance but the quantity, that is to say, that the contents of the large bowel are systematically completely removed, and that there is not an ever-increasing residue left behind.*** *In other words,* ***it is necessary to be sure that the patient is not passing (stool) today what he ought to have got rid of a week, or perhaps a month ago."*** *- Dr W. Knowsley Sigley, MD*

Dr James Galloway, Senior Physician of Charing Cross Hospital, holds that **Intestinal Toxemia is capable of producing nearly All Forms of Skin Disease.**

Among others:

1. **Lupus,**
2. **Erythematosis,**
3. **Dilation of the vessels of the skin, also**
4. **Purpura, and**

5. Pigmentation of the skin; and especially the following
6. A yellow tint due to urobilin,
7. Jaundice noted in cases of anemia,
8. Hemachromatosis, the skin acquires a mahogany brown or slate black color, a red brown tint noted in anemia,
9. Cirrhosis of the Liver,
10. Enlargement of the Spleen, and other
11. Pigmentation produced by methemoglobinemia and sulphoglobinemia.

Intestinal Origin of Certain Eye Diseases

> ***"Although not generally recognized, the Eye, as a matter of fact, is an organ that registers in a very delicate manner certain conditions of the system, and amongst these conditions Intestinal Toxemia is markedly one."*** *- Ernest Clarke*

Hardening of the lens may be delayed by the absence of, and accelerated by the presence of, certain poisons in the system, and Intestinal Toxemia takes a very high place in the list.

I think I have said enough to prove that **Premature Hardening of the Lens is a very constant sequela of Intestinal Stasis.**

The Effects of Intestinal Poisons

Changes in the arteries of the brain, have been produced in monkeys to which small doses of paracresol have been administered daily during several months.

Experiments conducted by Metchnikoff and his students showed that hardening of the arteries may be produced in guinea pigs, and rabbits by giving the animals daily small doses of indol, and phenol.

Bouchard showed that an extract prepared from faeces possessed highly toxic effects. He also noted that the faeces of a person living on a mixed diet are twice as toxic as those of a person living on a non-flesh diet.

Herter showed that an extract of the faeces of a carnivorous animal produces deadly effects when injected into the bodies of small animals while similar extracts of the faeces of herbivorous animals do not.

Bacteria Produce Highly Virulent Poisons

> *Some of* ***"The micro-organisms inhabiting our bodies have set going there a poison factory which shortens our existence and by secreting poisons which penetrate all our tissues, injures our most precious organs, our arteries, brain, liver, and kidneys."*** *- Metchnikoff*

Adolph Schmidt, one of the leading internists of Europe, thus describes the effects of Intestinal Toxemia:

"Most of the symptoms that clearly result from the effects of Intestinal Decomposition are displayed by the nervous system. They are of the most varied kind. At one end of the series there is simple headache; at the other come, convulsions and collapse.

The more usual forms may be considered under the headings:

1. The general phenomena observed in cases of Severe Constipation;
2. Epilepsy or Eclampsia;
3. Psychoses.

The general phenomena observed in cases of Severe Constipation include the nervous symptoms seen in chronic habitual constipation - feelings of being out of sorts, lassitude, headache, giddiness, neuralgia, ill-humoured, and so on."

The Most Common Putrefactive Colon Bacteria

The 3 Putrefactive Bacteria that are chiefly responsible for putrefaction in the human Intestine are the:

1. Clostridium Putrificum (B. putrificus Bienstock).
2. Clostridium Sporogenes.
3. Clostridium Perfringens (Bacillus of Welch).

These bacteria are not only putrefactive but are pathogenic.

According to Strassburger, and other authorities the number of bacteria produced in the intestinal tract every 24 hours is so great that in many instances these organisms constitute 50% of the total mass of the solid contents of the faeces. Many of these Bacteria Produce Highly Virulent Poisons.

Not infrequently nearly the total mass of micro-organisms consists of poison-forming organisms, such as the Bacillus of Welch and other putrefactive organisms. The Colon Bacillus (any of several Bacilli that are normally commensal in vertebrate Intestines), as pointed out by Metchnikoff, is an active poison producer under the conditions that are always present in the colons of persons suffering from Intestinal Toxemia.

It is true that the Colon Bacillus is an acid-forming organism, as pointed out by Bienstock, but it has been clearly shown by Metchnikoff and his followers that this is true only when the organism is well supplied with carbohydrates.

These are present if at all, only in minute quantities in the faeces of persons suffering from Intestinal Toxemia.

Important Note Concerning Bacteria

“Bacteria are easily susceptible to certain Factors:

1. Temperature, (this can be easily demonstrated by the process of yogurt making, whereby the yogurt bacteria will only be activated at a certain temperature, usually 38 to 42 C., depending on the type of bacteria. Another interesting point observed, when making yogurt, is that when the milk temperature is lower than 38 C. some bacteria become more active than the ones we desire for the formation of the yogurt, thus temperature plays an important role favouring the multiplication of some bacteria than others).

2. Environment - Hygiene - (the state of decay in the organ of the host)

3. Nutrients (the Metabolism, of the food products consumed by the host)

4. Function Status of the Host, and its implications (is the host organs functioning normally?, or is there Stasis?)

This 4 Factors, affect all Bacteria, and have an immediate effect upon their:

Appearance & Actions, this is called Pleomorphism.

Bacteria of the same type, have the ability to occur in various distinct forms, and are capable in having variation in their size and shape, all depending upon any of these 4 Factors.” - Rui Alexandre Gabirro, Emunctologist

Pleomorphism of Bacteria

“**Reckless species making.** Until recently there were few American textbooks that did not adhere to the rigid monomorphism that had been taught in Germany.

Latterly, however, **there has come a growing recognition that a species of bacteria may exhibit morphologic variations, the changes in form being associated frequently with alterations in the cultural conditions or, as has further been suggested, representing different stages of a life cycle.**

Microorganisms may change their physiologic properties quite readily with altered environment, and the new variety may retain the acquired peculiarities for some time even if brought back to the original conditions. Scientific study has been directed of late more to the physiologic than to the morphologic problems of bacteriology; but the subject of pleomorphism is at length attracting renewed consideration.

Just as slight variations in the morphology of bacteria were once used unwisely as the pretext for describing new species, so today the phenomena of pleomorphism are called on to explain the contradictions between different investigators in the search for the pathogenic etiologic agencies in certain as yet unexplained diseases.” - in “JAMA”, 8 October 1921.

"At present it is difficult to say whether they are entirely different organisms, or whether they are different forms of one and the same organism.

In spite of numerous attempts, as yet no one has succeeded in tracing the source of B. Bifidus outside of the intestinal tract.

From the foregoing experiments, the conclusion may be drawn that B. bifidus communis of Tissier has an aerobic phase, in which it resembles B. mesentericus fuscus." - in " Pleomorphism and Pleobiosis of Bacillus Bifidus Communis", The Journal of Experimental Medicine, 14 March 1910.

"The pleomorphism of the common colon bacillus has been noted by most observers. **Beyond this it has been observed that bacilli from different sources, grown on similar media, differ from one another.**

Conclusions

These results may be summed up by saying that in such nitrogenous media as proteid and ammonium tartrate, the average length of the bacillus is greatest in proportion to its breadth; while in glucose, to which a minimum amount of nitrogenous material has been added, it is shortest; and that in leucine.

From these results it may be concluded that the composition of its food stuff plays a considerable part in determining the shape, size, and structure of the bacillus." - in "The Pleomorphism of the Common Colon Bacillus", The Journal of Pathology and Bacteriology, 1898.

"One of the greatest services that Koch has rendered to bacteriology is his invention of methods of pure culture, by means of which such isolated colonies, originating from a single germ, can be cultivated at will and obtained free from any admixture with germs of other kinds.

Such pure cultures, reared under perfectly similar conditions, always agree in form and physiological action at any given stage. But this is not real constancy.

The similarity does not depend upon the invariability of the bacteria, but upon the fact that the conditions of life suffer no alteration.

If the conditions fluctuate, the bacteria will also vary in form and in physiological activity. Individual bacteria as well as their zoogloeae or colonies always adapt themselves to the "milieu."

The constancy which Koch's method revealed was not one of true permanence of species, but rather one of permanence of varieties due to station. As one emigrant in his new home clings strenuously to the manners and customs of his fatherland while another quickly forsakes them, so some species of bacteria transplanted into changed conditions of life preserve their original characteristics, while others part with them." - in "The Principles of Bacteriology", 1899.

Note: For More Information on this subject, please read the Book: "Medicine From Bad Pharma To Bad Science", 2022.

Colon Infection And Its Effect Upon the Urinary Tract

"The Colon Bacillus has been found in connection with a large number of diseases. There are great difficulties in the way of accurate identification and classification of bacteria, as witness the so long **confused relations between the Colon and Typhoid Bacilli.**

Only recently has it been possible, by means of Pfeiffer's phenomenon (Widal's reaction), to show that there is a fundamental difference between these 2 organisms.

A large number of the investigations bearing on the Colon Bacillus are of little value, because of the incomplete descriptions of the forms of growth and other biologic characteristics of the bacilli studied.

Rahlff attempts to draw a clear picture of the topic colon bacillus and its biology. For this purpose he cultivated 62 different kinds of this microbe, partly from the feces, partly from pathologic products.

He describes the typic colon bacillus as follows:

It is decolorized by Gram's method; does not liquefy gelatin; it decomposes lactose and glucose, and grows quite luxuriously on different kinds of potato.

It does not decompose urea, but among the author's 62 varieties there were 2 which decomposed urea, one of these coming from the feces, the other from urine containing pus.

There are numerous microbes that resemble the Colon Bacillus, but differ in 1 or more points from the typical organism.

Consequently, all investigations concerning this bacillus or allied forms should definitely specify the morphologic and biologic characteristics.

The forms which Rahlff has studied were obtained partly from normal feces, partly from pus in perforation peritonitis, and also from purulent urine.

In many cases one variety was obtained from the normal excretions, and another from the pathologic product.

The virulence was determined in a large number of cases by intraperitoneal injections into guinea-pigs.

It was found that the colon bacilli from the normal feces, as a general rule possessed the same nearly constant degree of virulence, whereas the bacilli that were obtained from the urine varied very much, some being more virulent, others less virulent than those isolated from the feces of the same individual.

Among the large number of disease-processes, with which the Colon Bacillus is more or less closely connected, the author has selected for more extensive study, infectious processes in the urinary tract, and perforativo peritonitis.

The Colon Bacilli, have the power of preventing by overcrowding the growth of other bacteria.

It may be regarded as fairly well established, that the colon bacillus may migrate in large quantities into parenchymatous organs, not only after death but also during the agony, and that when found outside the digestive tract under

such circumstances the colon bacillus has undoubtedly incorrectly been regarded as the cause of the perhaps fatal illness.

In agreement with the claims of Rovsing, Rahlff insists that the colon infection of the urinary tract is essentially a benign process.

The colon bacillus but rarely attacks the bladder; the kidney and the pelvis are however, often involved, being the seat of the primary infection, which may descend along the ureter.

The Colon Infection of the Kidney, and Renal Pelvis is described clinically as of rather sudden beginning, with:

1. Fever and Chills; at times severe and persistent, at other times less well marked,
2. Lumbar Pains; and a
3. Constant Diarrhea. Often the
4. Urine is Burning: there may be vesical tenesmus, and the urine, which is acid, will be found to contain,
5. More or less Pus and numerous Bacteria.

Objectively, there is usually a marked tenderness in the region of the kidneys.

The attacks subside very generally without any treatment, except that the urine may continue opalescent and free of bacteria for a longer or shorter time, while the patients have otherwise apparently regained perfect health.

The more severe cases depend upon a gastro-intestinal disturbance, which is shown by the very nearly constant diarrhea, and that from the intestinal tract the colon bacilli pass into the blood and become localized in the kidney and the pelvis.

In many cases a pre-existing Nephrolithiasis (kidney stones, renal calculi), seems to favor this localization.

It is very probable that the local renal infection occurs during the process of elimination through the kidneys." - in "Studies of the Colon Bacillus: Colon Infection of the Urinary Tract", JAMA, 17 December 1898.

Colon Bacillus Pneumonia

"It is universally acknowledged that the enteric flora rarely causes pulmonary infections in patients who have previously enjoyed good health.

The most frequent pre-existing disorders are:

1. **Alcoholism**
2. **Diabetes**
3. **Chronic Heart Failure**
4. **Uremia**
5. **Chronic Pulmonary Disease**

Patients receiving immunosuppressive therapy for homograft transplants often succumb to overwhelming infections by gram negative organisms, particularly Pseudomonas Aeruginosa (Infectious pulmonary disease in patients receiving immunosuppressive therapy for organ transplantation, N.E.J.M., 1964).

It is less commonly known that Colon Bacillus Pneumonia may be the result of seeding of bacteria from intra-abdominal or retroperitoneal infections.

Focus of Infection

Cases have been cited (Characteristics of Pneumonias caused by Escherichia coli, N.E.J.M., 1967), in which the **Focus of Infection has been:**

1. **Diverticulitis.**
2. **Appendicitis.**
3. **Cholecystitis.**
4. **Pyelonephritis.**

In most of these cases, the clinical or laboratory findings were such that the primary inflammatory foci were easily discovered.

This was particularly true when the infection was so situated as to give rise to the classical clinical findings of **peritoneal irritation (the tissue that lines the abdominal wall and pelvic cavity).**

The purpose of this communication is to report 2 cases of **infections confined largely to the lesser peritoneal sac, with the unusual simultaneous occurrence of Pulmonary Infection caused by Enteric Bacilli.**

One of these cases is of special interest in that the Pneumonia was the predominant entity, and that the abdominal infection was diagnosed by purely roentgen means.

Pathogenesis

It has been shown that when the Mucous Membrane of the Bowel is Inflamed, Organisms Readily Pass Into the Portal Venous System.

In more severe infections, a systemic Bacteremia (Bacteria in the Blood) may occur. In the non-debilitated patient, organisms carried by the blood rarely survive in distant sites.

It is virtually certain that an intraperitoneal abscess of any appreciable duration is accompanied by a transient or persistent bacillemia (bacilli in the blood).

Whether or not the lungs become infected depends upon the severity of the bacteremia and the capacity of the host tissue to resist colonization.

In Tillotson's large series of **Colon Bacillus Pneumonias, the following order of incidence was observed:**

1. **Klebsiella-enterobacter,**
2. **Escherichia coli,**
3. **Pseudomonas,**
4. **Bacteroides,**
5. **Proteus species,**
6. **Haemophilus influenzae,**
7. **Achromobacter.**

The organisms most commonly found in intra-abdominal, and retroperitoneal inflammatory diseases are:

1. **Escherichia coli,**
2. **Pseudomonas,**
3. **Bacteroides, and**
4. **Proteus species.**

Not only are there a number of organisms common to each of these groupings, but there is also a striking similarity in their order of incidence." - in "Colon bacillus pneumonia: a complication of lesser sac abscess", Am. J. Roentgenol Radium Ther. Nucl. Med., October 1969.

"The Lymphatic Drainage lines from the sub-diaphragmatic viscera are factors of which we have some definite knowledge. The subperitoneal, submucous and interlobular visceral lymph capillaries drain through collecting radicles into definite groups of neighbouring lymph-nodes and from these nodes efferent vessels eventually empty into the lumbar trunks, receptaculum or thoracic duct.

Clinically, the anatomical relation that definite groups of nodes bear to definite organs and areas and to each other enters into the pathological conception of all infections of the abdominal cavity and visceral malignancy.

Metastatic deposits in tissue distant from a primary carcinomatous focus are observations too common to arouse comment. Malignant invasion of the liver from the breast by means of a retrograde permeation of the epigastric or costoxiphoid lymphatic channels has long prompted surgeons to adopt the routine removal of these avenues of extension in operations for carcinoma of the breast. Deaver and Pfeiffer (A.J.M. Science, 1912) consider clinically the important relation between infections of the gall-bladder and pancreatitis and the lymphatic intercommunication of gall-bladder with duodenum and pancreas. Infections of the appendix may travel far indeed when the spread of its outgoing lymph stream may be known to reach the upper abdomen. Sweet and Stewart (Ascending Infection of the Kidney, Surg., Gyncc., and Obst., 1914) offer considerable evidence that **the ureteral submucous and subperitoneal lymph-channels are the avenues of extension for infectious processes from the**

bladder to the kidney, and not the ureteral lumen. **The peritoneal sac, seems to possess distinct and extremely active potential lymphatic absorption lines.**

These appear to be independent of those of the visceral system, and are present over the whole surface of the dome of the diaphragm.

Poirier and Cuneo have described the diaphragmatic lymphatics as forming glandular groups on the convex or pleural surface of the diaphragm, arranged as a few small nodes posteriorly between the crura, 2 small middle groups placed laterally and several anterior groups including the costoxiphoid glands of Sappey.

These latter anterior groups receive afferents from the liver through the falciform ligament and send efferents to the retrosternal chain of lymphoid tissue.

The hepatic radicles from the falciform ligament of the liver unite in a short trunk at the ensiform to penetrate the diaphragm and empty into the costoxiphoid nodes. From the internal mammary chain efferent lymphatics join the thoracic duct at or near the subclavian vein or enter the subclavian independently.

Efferent channels from the posterior and lateral diaphragmatic groups are said to drain posteriorly into the juxta-aortic nodes or direct into the duct.

Afferent vessels to these diaphragmatic nodes are not mentioned.

The problem of investigating **Lymphatic Drainage** from the peritoneal sac has been studied by Von Recklinghausen, Poirier and Cuneo, MacCallum, Muscatello and many others and has been carried on by means of the injection of foreign agents into the peritoneum and histologic study of the diaphragm.

The exact manner and path of absorption from the peritoneal cavity of injected foreign agents

Muscatello (Virchow's Archives'), 1895, and Buxton and Torrey (J. Med. Research July 1906) made the remarkable observations that finely divided particles of carmine, carbon, chicken blood corpuscles and dead micro-organisms were transported from the peritoneal cavity of animals to the superior retrosternal lymph- nodes at the junction of the first rib and the sternum in 5 minutes.

The writer has conducted similar experiments 50 or more times, and has found that not only does India ink and fine lampblack reach these distant lymph-nodes from the pelvic fossa with this remarkable speed, but in some instances reaches the bronchial lymph-nodes as well. There seems to be no doubt, therefore, that there exists a prompt lymphatic absorption from the peritoneal sac by certain lymph-vessels which carry the absorbed material as far as the superior retrosternal lymph- nodes.

The existence of a direct lymphatic absorption as opposed to or in conjunction with a hematogenous absorption

Wells and Johnstone (Journal of Infectious Diseases, 1907), have successfully attempted to show that bacteria do not pass into the blood-vessels of the general peritoneum, but reach the blood wholly by way of the lymphatic vessels.

In order to approach the conditions active where fluids are to be absorbed from the peritoneal sac, the writer injected with the same technic used for carbon, 3 c.c. of a 0.1%, solution of trypan blue.

The animal was killed immediately and in the short space of time necessary to remove the superior retrosternal lymph-nodes, namely, 2 minutes, these were found a deep blue color.

Time had not elapsed for any general diffusion of the dye and we feel justified in concluding that it had travelled from the pelvic fossa by the same channels as the absorbed carbon.

Conclusions

1. Absorption of certain solid foreign material injected into the peritoneal sac occurs with marked rapidity, first by a process of translocation through the cells of the diaphragmatic mesothelium and later through the agency of leucocytes.

2. That such solid foreign material having passed the peritoneal mesothelium is conveyed through the endomysial tracts throughout the diaphragmatic musculature to the lymphatic radicles on the pleural surface of the diaphragm, from these through the various diaphragmatic gland groups to the costoxiphoid glands of Sappey, and from thence through the retrosternal chain of lymphoid tissue to the subclavian vein or thoracic duct.

3. That certain fluids injected into the peritoneal sac follow the same lymphatic absorption lines, whether they coincidently enter the blood stream directly or not.

4. That the tissues of the diaphragm take a distinctly active part in absorption from the peritoneal sac, and that other areas of parietal peritoneum functionate little if any in the lymphatic absorptive process.

5. That the post-operative postural treatment of pelvic peritonitis as advocated by Fowler **has definite pathological foundation."** - Dr William Cavan Woolsey, MD, From the Department of Surgical Pathology of the College of Physicians and Surgeons of New York, in "On the Lymphatic Drainage of the Peritoneal Sac", Annals of Surgery, March 1915.

> *"The peritoneal space drains to celiac, superior mesenteric, and periportal lymph node groups first. Lymph continues via the thoracic duct to mediastinal lymph nodes.* ***Bowel lymphatics are a key determinant of peritoneal lymph flow, as bowel resection shifts lymph flow directly to intrathoracic lymph nodes via chest wall lymphatics."*** *- "Lymphatic Drainage of the Peritoneal Space: A Pattern Dependent on Bowel Lymphatics", Ann. Surg. Oncol., February 2007.*

*"**The lesser Peritoneal Sac, is an intricate anatomic region involved in many disease processes. It is a significant conduit for the spread of disease within the Peritoneal Cavity. The spectrum of pathologic processes pertaining to the lesser sac, can be classified on the basis of the type of involvement, such as a fluid collection (e.g., transudate, exudate, bile, and blood), a mass (e.g., neoplastic or nonneoplastic conditions and lymphadenopathy), or an internal hernia into the lesser sac."** - in "The Lesser Sac and Foramen of Winslow: Anatomy, Embryology, and CT Appearance of Pathologic Processes", American Journal of Roentgenology, 12 August 2020.*

Colon Bacillus Infections

"Infection by the Colon Bacillus may produce, in some cases simulating other diseases. A large percentage of cases the selective point of Infection is in the Urinary Tract. Infection occurs elsewhere, however, with considerable frequency.

Murray and Williams report that colon bacilli are present in normal urine in 44.5% of gynecological cases before operation, this does not mean that the colon bacillus is a normal inhabitant of the urine. **The presence of colon bacilli in the urine is a pathologic condition, may produce serious results at any moment, and, in my opinion, calls for immediate treatment.**

Colon bacillus infection of the urinary tract is the most common type.

The modes of infection are as follows:

Ascending infection, through the urethra; Descending (through the blood stream); and Infection by contiguity.

With ascending infection, the bacillus coli enters the urinary tract by way of the urethra.

The greatest number of cases apparently occur among females, due, it is believed, to the short urethra and its proximity to the vulva and anus, rendering contamination easy. In the male, Melchior claims to have found the colon bacillus in the meatus in 50% of cases examined, and others have demonstrated it on the foreskin. There is, moreover, the possibility of the bacillus being carried into the bladder by instrumentation, such as by catheterization.

It has been demonstrated by Bond on post-operative cases that **there is an ascending current from the urethra to the bladder and thence to the kidney.**

This upward current was more marked when there was an obstruction to the urinary outflow, which last suggested that disease of the urinary tract, interfering with micturition, would render infection more easy.

It is also well known that: Kidney Infection frequently follows Transplantation (moving tissues, or organs from a donor to a recipient), **of the ureter into the intestine. The lymphatics and blood vessels of the ureter may also furnish the port of entry to the infection.**

Hematogenous Infection

Infection through the blood stream, is the most common cause, of the so-called "descending infection."

There is most frequently a solution of continuity, or ulcération in the intestinal tract.

The writer has seen such infection in association with typhoid fever, intestinal ulcer, and intestinal catarrh; and in one case Constipation was an apparent factor for the passage of the bacilli.

Infection through the blood can also occur, excluding blood infection from the intestines.

As an example of this method of hematogenous infection extraneous to the intestine, tonsillitis is believed to be the source of infection of some cases, and Rovsing refers to such cases.

The writer has recently seen a recurrence of colon bacilluria following tonsillitis in a patient who for 6 months had no colon bacilli in the urine.

In this connection it is interesting to note the effects of colon bacilli on the liver.

E.L. Opie in his experiments has shown that **bacteria in association with toxic substances having a special affinity for the liver,** such as chloroform and phosphorus, may produce changes, which neither the poison nor the bacteria can cause when acting alone.

The possibility that disturbances of metabolism in the human being may produce changes in the liver, similar to those caused by such poisons is well shown in the toxemia of pregnancy.

The experiments demonstrate that the activity of an hepatic poison may be so intensified by bacterial infection that a quantity of the poison, which alone produces little change, may, in combination with bacillus coli and streptococcus pyogenes, cause destruction of almost the entire hepatic parenchyma.

Moreover, bacterial infection may influence and even determine the development of cirrhosis of the liver.

Degenerative changes which usually undergo rapid repair may cause sclerosis when combined with bacterial infection.

Infection by Contiguity

Bacteria can pass from the Intestines into the Lymphatic spaces, even though there is **only a slight lesion of the intestinal wall, and undoubtedly some of the intra-abdominal masses due to Colon Infection result thereby.**

Colon Infection of the pancreas through the lymphatics of the pancreatic duct may occur as well as through the blood stream or duct channel.

This is also true of the common bile duct and gall bladder.

Direct rupture of a colon bacillus abscess may also occur into some part of the urinary tract.

It is interesting to note that Franke has shown that in rabbits there is a lymphatic connection between the caecum, ascending colon and right kidney.

The Colon Bacillus has a definite relation to certain Infections in the Gastro-intestinal tract.

It has been found as a factor in Acute Appendicitis, and also in the fluids of Acute Peritonitis.

It has been responsible for inflammation of the pancreas and gall bladder; and colon bacilli have been found as the nucleus of gall-stones and pancreatic calculi.

Furthermore, Fenton B. Turck has fed colon bacilli to dogs and has experimentally produced gastric ulcer in these animals; and in the Mayos clinic, Pilcher has found colon bacilli in cases of achlorhydria hemorrhagica gástrica.

R.T. Morris believes the colon bacillus entering the terminal vessels of the duodenum may in some cases be responsible for ulcération of that viscus.

Acute gastric ulcer complicating appendicitis might result from the same source.

Herter's investigations into intestinal putrefaction show the influence of the bacillus aerogenes capsulatus in the production of pernicious anaemia.

The possibility that this last condition may at times be the result of colon bacilli infection is suggested by A. Charlton in his researches at McGill University, in an article entitled: "On the Anemia Produced by Repeated **Injections of Cultures of a Colon Bacillus** of Low Virulence."

Striking results followed intravenous injections, the experiments being carried on for many weeks.

They were as follows:

Advanced anemia occurred, in some respects much like the condition found in pernicious anemia, namely, a great diminution in the number of red cells, marked poikilocytosis, the appearance of pear-shaped cells, crescents, macrocytes, microcytes, and, lastly, nucleated red cells.

On suspension of the injections for some weeks even when the fall of erythrocytes was from 5 and a half to only 1 and a half millions, **spontaneous recovery took place.**

When injection of the Bacilli was resumed, the injurious results were more marked than before, but in addition to the effects on the blood, strikingly progressive changes were produced in the spinal cord, consisting of diffuse degeneration in the columns of Goll and in the anterolateral columns of the cord, closely resembling the conditions in the spinal cord in some cases of pernicious anemia.

Extreme emaciation occurred, the animals dying apparently from pure asthenia, though they fed well and suffered from no gastro-intestinal disturbances.

Wm. H. Thomson compares this condition, to progressive anemia with emaciation and nervous weakness grouped under the vague term "neurasthenia."

H.G. Harris, has reported an interesting and unusual case of infantile paralysis in which colon bacilli were found in large number in the urine.

The patient recovered under the use of urotropin and lumbar puncture.

In view of the changes produced in the spinal cord, experimentally by the injection of colon bacilli into the circulation, the clinical case cited is of interest.

Types of Infection Produced by the Colon Bacillus

Among the types of infection produced by the colon bacillus are: Acute, Subacute and Chronic Nephritis, which have been admirably portrayed by Dr Wm. Hanna Thomson in a recent article.

Pyelitis, Pyelonephritis, Septic Infarcts of the kidney, Cystitis, and Enuresis may result from Colon Bacillus Infections.

Attacks of intermittent fever, the fever coinciding with the appearance of colon bacilli in the urine, and the intermission, with their disappearance, have been reported.

Intra-abdominal exudates and tumors, believed to be tubercular or carcinomatous, have been demonstrated to be due to pure colon bacilli infection.

Cases simulating pernicious anemia may be due to the same cause.

Choroiditis (inflammation of the choroid and retina of the eye), has also been reported as due to this infection.

The author later describes in this article a case, **who suffered from general infection with the colon bacillus.**

This patient had a double pyelitis, cystitis, double pneumonia, purulent bronchitis, 2 attacks of colitis and myocarditis, all in succession, and ultimately recovered.

Colon bacilli were present in the urine and sputum in enormous numbers.

Infection of the respiratory organs by the colon bacilli is rare, though a few cases have been reported. Wound infection by colon bacilli may also occur.

Subdiaphragmatic Abscess has also occurred due to this infection.

Acute cholecystitis or gall-stones are not an uncommon result.

The writer believes **acute suppurative pancreatitis and at times acute gangrenous pancreatitis may be due in part to this type of infection.**

Pancreatic lithiasis may be dependent upon it, and the writer has recently treated a case of undoubted chronic interlobular pancreatitis, with steatorrhea, with a loss of 18 kg weight in 2 years, diarrhea and colon bacilli in the urine.

There was a previous history of duodenal ulcer apparently cured.

I believe the interstitial pancreatitis was in part the result of the colon infection attacking the pancreas, just as cirrhosis of the liver was experimentally produced by Opie. **The Colon Bacillus has also been responsible for an epidemic giving the clinical symptoms of Typhoid Fever.**

It has been mistaken for Influenza, and I can remember one case in which the diagnosis was disputed, one holding the condition due to cholecystitis, another to appendicitis with retroverted appendix adherent to the liver, and another to renal infection (abscess), in which first an intraperitoneal and later an extraperitoneal (lumbar) incision was made.

Infarcts of the right kidney were discovered (areas of tissue death resulting from a lack of blood supply, which deprives the tissue of oxygen). This occurred several years ago. With our present knowledge of the possibilities of colon bacillus infection such errors would be avoided.

Urine

The urine of colon bacilluria, unlike other urines which are decomposed by the bacteria giving an alkaline reaction and an ammoniacal odor, remains strongly acid. Wm. H. Thomson and Howard Kelly emphasize this feature, and also that the same acid reaction is found with tuberculosis of the urinary tract.

Dudgeon states that the common reaction of the urine is acid, but that it is more often alkaline than might be supposed. Acid urine is certainly the usual finding with colon bacilli at the time the examination is made for diagnosis. I have subsequently seen the urine neutral after the ingestion of large quantities of water, and, of course, alkaline after the use of alkalis. In mild cases, the urine may appear quite clear, yet colon bacilli are found to be present; in more marked cases, there may be varying degrees of turbidity, and often the urine has an opalescent appearance with a faint mucous cloud.

Pyuria of varying severity is present; occasionally casts, and also epithelial cells and the colon bacilli (Gram-negative under the microscope).

In cases of acute nephritis due to colon infection, albumen, casts and blood are present.

Symptoms of Colon Bacillus Infection

On account of the diversity of these infections, it seems best to illustrate them by various cases. Acute infection of the kidneys will be first described.

Chronic Interstitial Nephritis

William H. Thomson holds that this condition may be primarily caused by slow infection of the kidneys by the bacillus coli.

Sudden terminations of cases of Chronic Interstitial Nephritis, characterized by oliguria or suppression of urine, are nearly always preceded by acute indigestion in some form. These cases are frequently attributed to an acute exacerbation of the chronic kidney disease. It is suggestive how soon in the course of Chronic Interstitial Nephritis Symptoms of Increased Kidney Affection Develop After Errors of Diet.

The writer, in his work on **"Diseases of the Intestines", under "Indicanuria", has called attention to the Acute Kidney Disturbance produced by Intestinal Putrefaction, as evidenced by marked indicanuria.**

Cholecystitis

Inflammation of the gall bladder is frequently produced by the colon bacillus, which may reach it, probably most frequently through the gall duct, or at times through the blood stream or lymphatics.

At the Johns Hopkins Hospital, the gall bladders of animals were infected with the colon bacillus, and subsequently cured, or inflammation prevented.

It would seem wise to examine the urine for the colon bacillus in all such cases.

Pyelitis and Pyelonephritis

Acute invasion of the kidneys by the colon bacillus may be productive of a pyelitis, usually bilateral.

First, one kidney is attacked; and after subsidence of acute symptoms, then the other organ is attacked.

There is a sudden rise of temperature, 39°- 40° C., often preceded by a chill, first one and later frequently the other kidney becomes tender on pressure, there is pain in the lumbar region, urine is highly acid, contains pus, occasionally blood, and is loaded with colon bacilli.

L. C. Dudgeon, in his Erasmus Wilson Lecture on "Acute and Chronic Affections of the Urinary Tract", also describes such cases.

He reports that such attacks sometimes occur with Appendicitis.

Finding such cases prone to relapse, he recommends treatment with vaccines (Enemas). As a matter of routine, the author believes that in all cases of pyelitis one should examine the urine for colon bacilli.

Pyelonephritis from Colon Bacillus infection occurs at times during pregnancy, Constipation being a factor.

Direct post-partum conditions are particularly favourable for this form of infection, the rectum being at times torn and frequently the seat of abrasions from stretching, and the urethra, vagina, etc., suffering traumatism.

Cystitis may occasionally occur from the same source, though more usually the difficulty lies higher up a pyelitis with irritable bladder associated.

Acute Unilateral Septic Infarcts of the Kidney

This condition may be due to pure cultures of the staphylococcus pyogenes aureus, virulent forms of streptococci, and there was one case in which the organism was the bacillus coli.

Other authors mention the latter as a frequent cause of this condition.

The symptoms, which are sudden in their onset, are chills, a temperature rising rapidly to 39°, 40° and even to 41°C., tenderness over the kidney, especially at the costo-vertebral angle (Brewer's point).

Pus, albumen, casts and at times blood are present in the urine.

The cause of unilateral infarctions can be readily explained by the probable occurrence of preceding lesions in this organ, according to the principle illustrated by S. J. Meltzer, who on producing minute lesions with a long needle in the liver, kidneys and other organs, and then injecting a virulent culture in the rim of the ear, produced abscesses only at the seat of these traumatisms.

Infarctions may occur in both kidneys. Differential ureteral catheterization will determine the correctness of the diagnosis and whether one or both organs are involved. The Gram-negative bacilli are present in the urine.

Choroiditis
Inflammation of the Choroid and Retina of the Eye

Robert T. Morris reports the case of a patient referred to him by John S. Kirchendall, who suffered from choroiditis which threatened to end in blindness.

Morris found that for years the patient had suffered from intestinal trouble due to fibroid degeneration of the appendix, and on its removal the patient recovered both from the intestinal indigestion and also from the choroiditis.

Stockton, has for years asserted that the colon bacillus was the cause of many cases of choroiditis.

Briscoe further refers to an interesting number of cases which have attacks of intermittent fever, the temperature coinciding with the appearance of colon bacilli in the urine and the intermissions with their disappearance.

He also notes how frequently ulcers in the rectum occur previous to invasion of the kidneys and other organs.

He, together with other authors, comments on the pale color of the urine, its milky haze, acid reaction and high specific gravity, together with the chronic persistence of the colon bacilli when they once appear in the urine.

He also notes that the urine never decomposes with an ammoniacal odor.

Briscoe makes the urine alkaline, gives frequent purges, and administers autogenous vaccination, every 7 days, with effective results.

Rawls refers to infection of the respiratory organs by the colon bacillus, but few cases have so far been reported. Finally, the author reports a case of general infection with the colon bacilli, in which the organisms were found both in the urine and in the sputum (phlegm, a thick type of mucus in the lungs).

The case was of such severity and suffered from so many complications, that it is reported at length. Finally, I wish to call to the reader's attention that in addition to the marked indicanuria in intestinal obstruction, colon bacilli infection may also occur. The possibility that gastric hemorrhage, as a complication of acute appendicitis, may be the result of an infarction from colon bacillus infection carried to the stomach with bleeding from an acute ulcer is worthy of investigation, especially in view of Turck's experiments." - in "Colon Bacillus Infections, with Report of Double Pneumonia and Purulent Bronchitis (Colon Infection) with Recovery", Boston Medical and Surgical Journal, 30 November 1911.

"My frequent observation has been that Colon Bacillus Infections of the Kidneys and the Bladder persisting and unyielding to treatment are invariably due to Colonic Stasis of the Faecal Current.

This interruption is usually in the cecum and is due to adhesions of this organ to the surrounding structures immobilizing it.

From the chronic stasis thereby induced, a constant supply of colon bacilli enter the circulation through the lymphatics in the kidney capsule or by the blood stream and primarily infect the kidney pelves on their way out, if there is any interruption to the free exit of urine, either in the ureters, at the neck of the bladder, or in the urethra.

Once the infection is established, it is practically incurable until a normal condition in the large intestine or one approximately normal is restored." - in "Treatment of colon bacillus infections of kidney and bladder", JAMA, 7 December 1918.

Colon Bacillus Not The Primary Cause

"The Colon Bacillus may at times be a primary invader in local inflammatory conditions of the intestines, such as Appendicitis, but even then it is more often present as a secondary invader and not as the primary cause.

Colon bacillus infections, are acute or chronic febrile diseases caused by the invasion of the blood stream or tissues by the Bacillus cola commumns, and are manifested clinically by either a continued fever somewhat resembling typhoid fever or by local inflammations with pus formation, of which inflammations of the urinary tract, the biliary tract and the peritoneum are the most common.

Hirschprung's disease is frequently complicated by pyelonephritis of the colon bacillus type, according to Langstein.

Colon Bacillus infection is the result of auto-inoculation by the organisms of the patient's intestinal canal.

While cases due to infected water supply or to direct contact with the organism occur, they are too rare.

The bacilli enter the body through the intestinal wall, through the skin in the region of the external genitalia and through the lower urinary tract.

Minute breaks in the continuity of the intestinal mucous membrane are sufficient to cause entrance of the bacilli.

Chronic Constipation and Acute Enterocolitis (inflammation of both the small intestine and the colon), are the most common diseases causing these breaks.

Operations upon the abdominal or pelvic organs, ulceration of the colon, intestinal cancer and parasitism may be followed by colon infection.

C.A. McWilliams states that Colon Bacilli may be found in the sac of a strangulated hernia, 10 hours after the onset.

Virulence of the Organism: Resistance of the Tissues

In addition to the presence of the colon bacillus, 2 other factors are to be considered in the production of disease: the virulence of the organism and the resistance of the tissues.

The Colon Bacillus normally has low virulence, but in acute enteritis or other intestinal disease its virulence is increased.

Cholelithiasis or obstruction of the common duct lowers the resistance of the liver to the colon bacillus.

Urinary calculus and trauma render the kidney more susceptible to infections by the colon bacillus.

Scarlatina, diphtheria and measles are more commonly followed by colon infections of the urinary tract.

It is possible that the kidney has been damaged by the toxins of the disease before infection takes place.

Symptomatology Clinical Findings

Infections by Organisms of the Colon Group may be classified into the following clinical types:

1. **Bacteriemia clinically similar to mild typhoid fever.**
2. **Local inflammations.**
3. **Bacteriemia with local abscess formation.**
4. **Secondary implantation of the bacillus upon a tissue already damaged.**
5. **Terminal invasion of the blood and organs.**

According to Phelps, the symptoms of infection in the urinary tract fall into 5 groups:

1. **Symptoms general in character;**
2. **Nervous System;**
3. **Pulmonary System;**
4. **Gastro-intestinal system;**
5. **Urinary system.**

Thompson adds **the group of uremic symptoms. Urinary tract infection with general symptoms usually occurs in infants. The child is pale and restless and loses weight. The onset is usually gradual, although it may be sudden at times.**

The fever is irregular in type and is liable to recur after longer or shorter intervals of quiescence. Chills are characteristic of colon infections at this age.

The type with predominant nervous symptoms is seen in infants and young children. Delirium, convulsions and coma occur, or there may be symptoms of meningeal irritation.

C. R. Box has observed children who are shy, nervous and dull and suffer from headaches and incontinence of urine.

The tongue is coated and the bowels irregular. There is colon bacilluria.

The symptoms disappear with the cure of the colon bacillus infection.

The pulmonary symptoms are caused by referred pain or diaphragmatic irritation. They include rapid respiration and pain in the lower thorax.

Symptoms referable to the gastro-intestinal tract occur most frequently in children. There are vomiting, abdominal pain, diarrhea or constipation.

There is abdominal distension and the spleen or kidneys may be palpable. The course is recurrent.

The illness may be manifested by attacks of indigestion or periodic vomiting.

Cases with urinary tract symptoms occur in older children and adults.

Culver, Herrold and Phifer present a careful analysis of the symptoms presented by 116 patients. Pain, chills and fever and frequent painful micturition are the 3 characteristic symptoms of upper urinary tract infection.

Pain occurs in about 90% of the cases. In most instances it is in the lower back, on one or both sides, and varies in intensity from a dull ache to an acute pain. It may radiate to the pelvis or thigh or to the neck.

It may occur in the abdomen simulating acute appendicitis or renal colic, or it may be in the bladder region only. Chills and Fever and frequent painful micturition are found in about 50% of the cases.

1. **Constipation.**
2. **Headache.**
3. **Vomiting.**
4. **Hematuria.**
5. **Loss of weight.**
6. **Incontinence of urine are less often observed,** but may be the only symptoms of which the patient complains.

Cases with Uremic Symptoms simulate Acute Nephritis. There are semi-coma, anuria, general edema, ascites, amblyopia, vomiting and headache.

Optic neuritis is frequent.

Thompson states that:

> ***"Sudden onset with early Delirium, then Coma, Fever and Uncontrollable Vomiting are pathognomonic symptoms of Colon Bacillus Renal Infection."***

Chronic Interstitial Nephritis

He also believes that many patients with Chronic Interstitial Nephritis eventually suffer from this infection which is the exciting cause of intercurrent uraemic attacks.

Colon Infection of the Kidneys, and Pelvis may show every grade of severity.

It may be so mild in character that the patient goes about his daily occupation for months; or it may be rapidly fulminating, **with chills, high fever, abdominal pain, delirium, severe Toxemia and prostration.** This latter condition has been termed **Unilateral Septic Infarction** by Brewer, who first described the disease as a clinical entity. It is designated Focal Suppurative Nephritis by Keyes.

The duration of colon infection of the urinary tract is variable.

Other cases may clear up temporarily both as to symptoms and urinary findings, and later relapse. Others still continue to have symptoms of little or moderate severity associated with occasional periodic exacerbations.

Acute or chronic urethritis, epididymo-orchitis and prostatitis are caused by the colon bacillus. Endometritis and pelvic inflammations due to this organism are occasionally observed.

Appendix

H. A. Kelly states that the colon bacillus has been found in 86% of the cases operated, generally associated with other organisms, especially the streptococcus and staphylococeus. He noted that the cases due to the colon bacillus alone were milder and that the disease was limited to tissues of the appendix region, while the cases of mixed infection showed extensive and severe peritonitis.

The colon bacillus rapidly overgrows the streptococcus and the staphylococcus, and for this reason may be found alone even when it is a secondary invader.

Low, also noted that the colon bacillus alone causes a less severe disease than the streptococcus alone or than a mixed infection.

Metastatic Abscesses due to the colon bacillus may follow Appendicitis.

Biliary Tract

Cholangitis, liver abscess and subphrenic abscess may be due to the colon bacillus.

Peritoneum

Dudgeon and Sargent conclude that the colon bacillus causes the largest number of fatalities in peritonitis.

Organs Other Than the Kidney, Liver, Bile Ducts, Appendix and Peritoneum

In rare instances the colon bacillus invades organs other than the kidney, liver, bile ducts, appendix and peritoneum.

Lobular pneumonia, pleuritis, empyema and multiple abscesses of the lung have been observed. Endocarditis and Pericarditis are reported.

Meningitis may follow acute Enteritis or Otitis media.

Brain abscess and Myelitis are sometimes due to the colon bacillus.

The organism may be found in otitis media or mastoiditis, tonsillitis or empyema of the nasal accessory sinuses.

In the extremities, periostitis, suppurative Arthritis, and infections in lacerated wounds, have been reported.

Cutaneous abscesses of infants, herpes of the lips and mucous membrane of the mouth, and septic onychia (inflammation of the nail folds, is one of the most common infections affecting the fingers and toes), have been due to this organism. It may be found in the wounds of abdominal and other operations, and was first observed outside of the digestive tract by Tavel, in the wound of an operation on the thyroid gland. **The onset of the septicopyemia type of the disease is generally with chill followed by high fever.**

Fever rarely requires symptomatic treatment.

Hydrotherapy gives the best results.

Colon bacillus infection is almost always associated with certain other diseases." - in "Practice of Medicine", Vol. IV, 1924.

Colon Bacillus Cystitis and Pyelitis

"The Bacillus Coli is the most common bacterial cause of pyelitis and cystitis.

It is frequently present in cholecystitis.

Serious colon bacillus septicemia may develop as a complication of pyelitis or Colon Bacillus abscesses.

Meningitis has been reported to be caused by the Colon Bacillus, and Colon Bacillus pneumonia has been reported as a complication of a generalized infection. The bacillus has been considered by some to be the etiological factor in hemorrhagic septicemia of the newborn.

The Colon Bacillus is the most frequent cause of infection of the urinary bladder and pelvis of the kidney.

It is present in cystitis in almost 50% of cases and in 20% in pure culture.

It is reported to be responsible for 80% of the infections of the pelvis of the kidney. In addition to producing inflammatory processes in the urinary tract, the colon bacillus is a frequent cause of bacilluria (bacilli in the urine)." - in "A Text-book of Medicine: By American Authors", 1930.

The Toxic Effects of Poisons Upon the System

> ***"The Toxic Effects often went much further than this, and extensive degeneration of the Glandular Structures of the Intestine resulted. A noteworthy phenomenon was the formation of hyaline material about the villi, and the decomposition of the blood. The large intestine showed similar effects in less degree. Endocarditis, especially about the valves, was often present. There was oedema of the hepatic duct and gall bladder. The urinary bladder and pelvis of the kidney were occasionally the seat of the same changes as the Intestine."*** *- in "Therapeutic Gazette", 15 August 1887.*

Endo-Toxins

Is is doubtless true, as pointed out by Distaso and others, that **the chief sources of toxins from which the body suffers are not the toxins that are set free during the life of the micro-organisms, but rather the endo-toxins that are liberated after the death of the organisms.**

The tremendous potency of these Endo-Toxins is well shown reaction produced by the injection of a few drops of autovaccine, which consists simply of heat-killed bacteria culture, and the toxines derived from a few million bacteria.

When injected beneath the skin, a vaccine often gives rise to very marked rigor followed by a high fever lasting several hours, with numerous pronounced systemic disturbances.

Is is evident that the quantity of these poisons derived from the small number of bacteria injected is many times less than that which we know to be daily produced in the Human Intestine.

The chief reason that fatal effects do not ordinarily occur is to be found in the protection afforded by the intestinal mucous membrane and other organs of defence. The venom of a snake does no harm when brought in contact with the intact skin, but a very minute amount of venom introduced underneath the skin gives rise to distressing and often fatal consequences.

So long as the mucous membrane of the intestine remains intact, it is able to filter out these poisonous substances.

When, however, the mucous membrane is inflamed or eroded, this defense is broken down and the poisons gain access to the circulation.

Anaphylactic Phenomena Associated With Intestinal Toxemia

This fact explains many of the nervous and other distressing symptoms that accompany Colitis, and also various Anaphylactic Phenomena associated with Intestinal Toxemia, among which may be mentioned:

1. Urticaria, and various other
2. Skin Eruptions,
3. Asthma,
4. Migraine.

It is evident, then, that if the number of bacteria produced in the intestines each 24 hours can be materially lessened, distinct progress will be made in combating Intestinal Toxemia."

Changing and Reforming the Intestinal Flora

To change the intestinal flora is not an easy matter. It is necessary to do something more than to simply introduce a few acid-forming bacteria.

The soil must be changed. If we continue to put into the alimentary canal material of a sort that encourages the growth of putrefactive organisms, this class of micro-organisms will continue to be the dominant flora of the intestine.

But even a change of soil is not sufficient. Several measures must be employed in conjunction to successfully change the intestinal flora.

These are:

1. A Diet that will produce in the intestine a media unfavourable for the growth of putrefactive and pathogenic organisms.
2. Increased activity of the colon.
3. The introduction into the intestine of large quantities of acid-forming or protective bacteria.

The intestinal flora may be favourably influenced by any one of these 3 measures, but for definite and rapid change of the flora, all 3 of the methods must be employed simultaneously.

Is is a matter of common observation that carbohydrates (starches and sugars) ferment, while proteids putrefy.

Although both changes are due to bacterial action, there is a most important difference between the classes of micro-organisms involved in the 2 processes.

The organisms that give rise to fermentation produce simple acids - chiefly lactic or acetic acid - that are harmful only in very large quantities.

In the minute quantity in which they can be produced in the intestine they are usually entire harmless.

On the other hand, the microbes that give rise to putrefaction produce deadly poisons and toxins. Bacteria, like other plants, require soils favourable for their development. By a change of diet it is not only possible to change the bacterial inhabitants of the intestine, but to change the action, and even nature and influence of the colon bacillus and its congeners so that they no longer produce pernicious effects, but actually become a means of protection and defense.

Prevent the development of poisons, encouraging frequent and normal emptying of the colon."

The Milk Diet

The Milk Diet is one of the principal means of securing the beneficial results sometimes secured by milk feeding. We shall describe a practical method of using milk, the "Milk Regime", by means of which surprisingly good results have been obtained.

Results of Recent Experiments

Lactose, or milk sugar, is the most slowly absorbed of the sugars.

It remains in the intestine 4 times as long as does dextrose, or maltose, that is the sugars formed in fruit juices and that formed by the digestion of starch.

Increased Intestinal Activity

The multiplication of bacteria in the intestine is more actively encouraged by stasis or stagnation of the intestinal contents than by any other factor.

A most important means of lessening the multiplication of bacteria in the intestine is the acceleration of the food materials along the intestinal tract. Delay of intestinal contents at any point along the 8 metres of small and large intestine is quickly followed by the development of active bacterial changes.

Normally the stomach becomes empty in about 4 hours after the beginning of a meal and the small intestine discharges the last remainders of the meal into the large intestine 4 hours later.

In other words, the process of digesting and absorbing a meal normally occupies about 8 hours.

3 of 4 hours later the undigested residues of foodstuffs, mixed with excretory substances derived from the liver and intestinal mucous membrane, in a perfectly normal person may be discharged from the body.

Under such circumstances the opportunity for putrefactive changes is so slight that the bacteria developed are comparatively few, and the amount of poisons produced is exceedingly small.

In carnivorous animals the time required for the transit of foodstuffs through the alimentary canal is much shorter.

Some animals, such as the eagle, which live on an exclusively flesh diet, nevertheless live to great age because of the extreme shortness of the intestinal tube, which affords no opportunity for stasis and hence little chance for putrefactive changes. It must be clearly understood, that by increased frequency of bowel movement is meant, not simply one bowel movement a day, but at least 3 full bowel evacuations. In many cases it is desirable that as many as 4 evacuations should be secured. The normal rhythm of bowel movement is 3 evacuations daily, or a bowel movement after each meal.

Briefly stated, my reasons for this belief are these:

In healthy infants the bowels usually move soon after feeding. The same is true of healthy animals and active healthy children who are fed upon a natural diet that is sufficiently bulky to produce normal peristalsis. Among primitive people the bowels move after every meal, 3 evacuations are generally the habit.

This fact was ascertained by a questionnaire sent out to several hundred medical missionaries stationed among people of the most primitive types.

Hundreds of persons who have come under the write's observation and have been induced to adopt necessary measures for securing 3 bowel movements daily, have experienced notable improvement in health and the disappearance of headaches, languor, sleeplessness, loss of appetite, coated tongue, foul breath and a great variety of other symptoms that form the familiar clinical picture of Intestinal Toxemia.

Since the process of digestion and absorption is normally completed in 8 hours, no reason whatever can be assigned for the retention of the unusable remainders and waste matters that contribute nothing to the welfare of the body and may become a source of infinite mischief through putrefactive changes while waiting for delayed evacuation.

Natural Foods are natural laxative.

When food is taken into the stomach, peristaltic waves begin passing along the organ, from above downward at the rate of 3 to 5 waves a minute.

The peristaltic waves do not stop at the pylorus but continue along the whole length of the intestine, so that the taking of food stimulates the movements in the colon.

According to the observations of Hertz, Case, and others, **the contents of the colon are pushed forward 4 times as rapidly during the taking of a meal as when the stomach is empty.**

The writer has met a number of unusually healthy persons who attributed their remarkable health and vigour at an advanced age to the fact that all their lives they had had the habit of moving the bowels 3 times a day.

It is usually quite easy by the methodical use of simple means to acquire the habit of 3 Bowel Movements daily, and the results of this practice have always been found to be beneficial and in no way harmful.

The method is quite simple.

It is only necessary to supply the proper amount of bulk and lubrication required in each individual case.

For giving to the diet a proper amount of bulk, Nature has provided only a single food substance.

This is **cellulose (plant fiber).**

Animal foods of all sorts are practically all completely digestible.

Little or no residue is left in the digestion of meat for the reason that meat represents material that has once passed through the process of digestion in the digestive organs of an animal, and hence is capable of undergoing complete digestion when exposed to the proper digestive juices.

Cellulose is the one substance found in foodstuff that is not digestible in the human alimentary canal, although in certain animals, particularly herbivorous animals, nature has made provision for the digestion of cellulose.

Cellulose is found in larger or smaller quantities in practically all vegetable foods. In some instances it is found in larger quantities than in others.

The cellulose content of our foods varies greatly.

In fruits and fresh vegetables cellulose is found in a newly formed state in which it is very easily broken up, and it is on this account less valuable as bulk-producing material. It is easily acted upon by bacteria and broken up into gases resembling illuminating gas. The bran of cereals represents an older form of cellulose in which it has been transformed into wood and which is resistant to bacteria. Agar-agar represents a peculiar form of cellulose known as "hemi-cellulose" which is soluble in boiling water. This is also indigestible.

All forms of cellulose are useful in giving bulk to the intestinal contents; but bran and agar-agar, known also as "Japanese isinglass", are the most valuable of all.

For efficient stimulation of the intestine it is necessary to take with the food daily from 20 grams to 60 grams of cellulose.

This indigestible material or roughage should not be taken at a single dose, but should be taken at each meal in such a way that it will be thoroughly mixed with the various other food substances so that it will be equally distributed along the intestine.

Care must be taken that the requisite amount of cellulose is taken at every meal.

The omission to supply the necessary bulk for one single meal may give rise to stasis, the ill effects of which may last for several days.

In addition to increasing the bulk of the food, lubrication is often required.

Examination of the bowels and rectum generally shows, in cases of Chronic Constipation, a dryness of the mucous membrane.

As a matter of fact, a thorough examination of the stools is just as important for adults as for infants.

The delay may also be caused by Colitis, a condition that usually affects the left half or descending portion of the colon.

The irritation produced by Colitis causes the bowel to contract so that the passage of material along the canal is hindered.

This causes an accumulation in the caecum, and right half of the colon, a condition usually accompanied by the formation of large quantities of gas with discomfort from distension due to gas accumulation.

Slow disappearance of the colour may be due to **incompetency of the ileocecal valve.** When this condition exists, **the food residues do not advance with the normal promptness and regularity, but oscillate back and forth between the colon and small intestine.** X-ray observations have clearly shown this.

The small intestine may become empty as the result of the vigorous intestinal activity that accompanies digestion. The next day, however, although no food may have been taken in the meantime, several feet of the small intestine may be filled with putrefying material that has backed up from the colon. In such cases there is usually obstruction in the left half of the colon, which may be due to colitis or rectal constipation, or may be caused by prolapse and adhesion or incarceration of the pelvic colon. The slow disappearance of the colour may also be due to obstruction at the outlet of the stomach. This condition is often accompanied by great dilatation of the stomach. In such cases, 24 hours or even longer may be required for the complete discharge of the colouring matter from the stomach.

This, will cause delay in both the appearance and disappearance of the color as observed by examination of the stools. In modern of the times the use of milk as an exclusive diet was brought to the attention of the profession by Philip Karell, of St. Petersburg, physician to the Emperor of Russia. A paper written by this sagacious physician was translated by Carrick, physician to the British Embassy at St.

Petersburg, “On the Milk Cure”, Edinburgh Medical and Surgical Journal, August 1866.

Karell was perhaps the first to systematize the use of milk to insist upon its use in small doses. He made use of the remedy especially in the treatment of obesity and dropsy, though he commended it as a valuable remedy in many other chronic diseases. On this account, he employed small quantities, generally not exceeding 1.5 litres to 2 litres daily, the object being to reduce flesh or to promote the absorption of dropsical fluids.

He did, however, recognize the fact that **it was somehow through its influence upon the alimentary canal that the beneficial effects of milk were impressed upon the body.**

The Milk Cure

“It is always with a rich store of remedies, and with the profoundest belief in their efficacy that the young physician enters upon the practice of his profession. Experience, however, soon demonstrates to him the utter worthlessness of these pretended riches, and thus the practitioner, whose learning has ripened with age, finds his circle of ordinate remedies narrowing from year to year, until he is obliged at last to confess that upon the surface of his little nail, he could write down almost all the remedies which he employs.

If I have experienced something similar; if, after a practice extending over 34 years, I entertain certain doubts with regard to the curative virtues of particular medicines, I have acquired, on the other hand, a full belief in the efficacy of a class of remedies which have the power of modifying and changing nutrition.

It is impossible, to deny the effects produced by the thermal springs of Karlsbad, Marienbad, Eger, Kissingen , Vichy, etc.

Have we not all seen patients cured by those means, after we had treated them in vain for many years, employing occasionally the very salts to which the curative virtues of the mineral waters are ascribed.

With similar facts before us, we naturally arrive at the conclusion that the merit of effecting cures in the cases of which we have just spoken is to be attributed mainly to regular or methodical administration of these saline solutions.

This is, in fact, absolutely necessary: it is “a sine qua non” which the experience of ages has confirmed; and it would be vain for the invalid to partake of the most renowned waters, unless he intended strictly to obey the prescribed rules, by which means a thorough change of nutrition might be effected. In directing your attention to the methodical cure by means of milk, I do so in the full conviction that the numerous recoveries made by this treatment are due, in great measure, to judicious employment of the remedy, and to strict observance of method in its administration.

It is only by thus acting that it is possible to obtain really good results.

With regard to this plan of treatment, I believe I may claim credit for having been one of its warmest propagators in Russia, as well as in other countries.

I only did so, however, **after effecting a number of cures, which have since multiplied by hundreds, and which have of late increased to such an extent, that I have been unable to note their histories as fully as I did at the commencement.**

My perseverance would be fully rewarded were I to see this mode of treatment generally recognised and adopted by medical men, and **raised to that rank in Therapeutics, which, in my opinion, it so justly deserves.**

I shall first communicate the results of my reading, in the Imperial library, with regard to the subject under discussion, and I shall prove to you that the Cure of Disease by Milk is referred to by many authors, both ancient and modern.

Perverse Or Deficient Nutrition

I shall then trace, in a few words, the reasons which have made me arrive at the firm conviction, that in the use of this fluid we possess one of the strongest weapons against that obstinate enemy of practitioners which, **in spite of its being disguised under various forms of chronic ailments, is, finally, almost always recognised as a "Perverse, or Deficient Nutrition." Hippocrates was the first to recommend the employment of Cows Milk in Phthisis. He also extols it as an admirable remedy in Gouty affections, particularly when the articulations are involved, and also in Sciatica.**

In his "De Natura Muliebris", he suggests the use of it in Leucorrhoea.

Aretæus says:

> ***"If any Phthisic (wasting illness such as Asthma or Tuberculosis) He drank a lot of milk, but none he needs other food."***

Alexander of Tralles one of the most eminent physicians in the Byzantine Empire speaks highly of this remedy in phthisis.

Pliny treats at great length of the good effects of milk, in various diseases.

The celebrated Rhazes, or Razi, recommends Milk in all hectic Fevers.

Passing on to more modern times, we find a strong advocate of the Milk Cure, in the celebrated Hoffman.

He cites the following authors in support of his views, viz.

Martianus, says:

> ***"Milk is a Sovereign Remedy. By repeated circulation the prickly particles of the blood get blunted, while the alvine and urinary secretions produce the tartaric ferment, whereby the blood gets re-heated, and, depositing its sediment (scoria), becomes metamorphosed into new blood. But, the longer my cure is persevered in, the more radical will it be, provided the patient gets almost nothing to eat except the amount of milk prescribed."***

He also relies on the opinion of a Dr Wepferus, whom he calls the pearl of Swiss physicians. **Milk is recommended as an antidote in poisoning by Boglivus, Sydenham, Frenesco, Haller, Pechlinus, and many others.**

Andrew Baccius, Physician in Ordinary to the Pope Sixtus V, and Professor of Botany in Rome (who died about the year 1600), states, in Vol.4 of his works, that in Naples, Italy, certain meadows were reserved exclusively for medical use, as different plants were there cultivated according to the directions of physicians, and these plants served as pasture for the animals that were kept to give milk. The sick were afterwards sent away, as they are now-a-days, to some thermal spring.

It is particularly necessary, however, to cite Van Swieten on this subject:

> ***"Observations: They taught numerous people that the use of milk was beneficial in gout, and so much so, indeed, that they were free from every paroxysm as long as they were alone they would live on milk. It does not, however, destroy the hidden one in the gout the case of Pregumena. For he benefited from all the other raids this milky diet; as long as they did not depart from her with a broad claw.*** *But as soon as the diet of the healthy, he uses mild and gentle. He who had found him recovered, the gout immediately returned, and he was sick far worse than before this, he tormented."*

I freely admit that the experiences of the ancients with regard to this matter remained long unknown to me; but this ignorance was excusable, when compared with the ignorance which prevails pretty generally with regard to the practical investigations of modern authors, particularly when the information is furnished in medical periodicals, of which, in the present day, there is certainly no scarcity. Dr Chrétien, of Montpellier, published in 1831 very instructive details with regard to the great benefit of milk in dropsy, and gives the history of a number of such cases.

Nevertheless, some 15 years after the publication of these observations, there is not the slightest mention made of them in the Encyclopedia, Worterbuch der Medic. Wissenschaft, Berlin, 1846, although there is a long article on milk in that work. In "Hufeland's Jour. Der Praktischen Arzeneikunde", band 32, Dr Schluither, of Weimar, **refers to a case of malignant typhoid fever treated with milk. In "Schmidt's Annals", mention is made of 3 cases of dropsy treated by milk. In the "Allgemein. Medic. Annalen", 1817, there is an article by Professor Thilow, of Erfurth, "On the Use of Milk in Intestinal Obstructions." [Altenburg and Leipzig, vol. xii., Dec, p. 1555-1607].**

Dr Schmidtlein resorted to the milk cure in Bright's disease.

With regard to my own practice, I have, after fruitlessly trying all sorts of remedies in many chronic and obstinate diseases, at last succeeded in thoroughly bringing the alimentary canal, that seat of so many diseases, under my control. I did this by administering Milk, according to a new method.

Faulty Nutrition

After a great deal of experience, I have arrived at the conclusion, that in all Dropsies (Oedema), in Asthma, when the result of Emphysema (obstructive lung disease), and Pulmonary Catarrh; in Obstinate Neuralgia, when its cause lies in the intestinal canal; in diseases of the liver (simple hypertrophy and fatty degeneration), and generally in diseases where there is Faulty Nutrition, often a consequence of obscure sub-acute inflammation of the stomach or intestines, followed by affection of the Nervous Centres.

In all these cases, I consider milk as the best and surest of remedies.

Even in those cases where the dropsy is the result of organic heart disease, or of old-standing liver complaint, or of far-advanced Bright's disease, I have seen very marked improvement take place, which also lasted a considerable time.

If, in giving a general definition of the Milk Cure, we call it a Nutritive Cure, it by no means follows that it should only be administered in diseases dependent upon a Perverse Nutrition. It might as well be defined as a sedative cure. A more exact definition, perhaps, would be, that milk, when methodically administered, is a regulator of nutrition.

It might perhaps be urged that milk is a well-known remedy, and that every physician uses it in appropriate cases, admit that all medical men are sufficiently well acquainted with **Milk as a Nutritive Agent, and as An Antidote**, but I speak from experience when I assert, that in general the cure by milk, scrupulously administered, and in strictly measured doses, is not sufficiently, and only very rarely, recognised as a sovereign and useful remedy. I have frequently, during the last 15 years, been called into consultation in cases which were thought hopeless, and in many of which I recommended the milk cure, which had never been resorted to during the whole course of the malady. I had prescribed, even before that time, the employment of milk, but without regulating its administration.

It was only by degrees, that I arrived at a methodical system of treatment.

Experiments made by other physicians have tended to strengthen my convictions. Thus, when accompanying the late Emperor Nicholas in his travels, we arrived one day at Ishougneff, in the centre of the Steppes, where 8 Regiments of Cuirassiers, and some other troops were encamped.

An epidemic of intermittent fever was raging at the time.

I found many of the wards filled with dropsical patients, the greater number of whom had hypertrophied spleen and liver.

To my great satisfaction I saw a bottle of Milk at the bedside of each patient, and I learned from the senior physician, Dr Weks, that he had given up all other modes of treatment in those special cases, having found a sovereign remedy for them in milk. Another of my colleagues, Dr Behm, having made important observations during 5 years in the hospital to which I was also attached, wrote to me with regard to the **malignant Typhoid Fever which raged in Poland and Lithuania in 1854, that he had no success in treating that epidemic until he resorted to the Milk Cure.**

Dr Inozemtseff of Moscow, resorted, with the help of his assistants, during his long professional career, to the milk cure in nearly 1,000 chronic cases.

In his work on the "Milk Cure", published in Moscow in 1857, he speaks of the good results which he obtained from this remedy, and affirms that its efficacy is indisputable.

He points out the difference between a Milk Cure, and a Milk Diet, on which latter he places a patient for several years.

Inozemtseff refers the good results which I have obtained to the moderate doses in which the milk was given.

I believe that a regulated mode of administration is the most rational.

Milk is more easily digested when taken in small draughts, and at stated intervals. If we allow milk to be taken ad libitum, the patient will likely soon suffer from indigestion. I shall cite 2 very interesting cases from Dr Inozemtseff's book.

In the first case he relates the history of a young man, whose father, mother, brothers, and sisters had died of consumption.

Among other symptoms, tubercular deposit was detected in the apices of both lungs. Inozemtseff placed the patient on a milk diet for a 12 month.

Afterwards, he allowed the addition of other articles of food.

Under this treatment the young man recovered.

He married afterwards, and has kept his health ever since.

The second case, was that of a lady afflicted with enormous obesity.

She grew so large that she had to let out her chemises, and at last was almost suffocated in her own fat. All cures for obesity were tried, but in vain.

Dr Inozemtseff had seen many emaciated persons grow stout from the use of milk, but he was not aware that milk also had the power of producing a contrary effect. **All remedies having failed, he employed the milk cure, and to his great satisfaction his treatment was crowned with success.**

In 1861, I told Professor Felix Niemeier, Director of the Clinique at Tubingen, of my experience of the milk cure.

Perverse Nutrition

A short while after, he wrote to me as follows:

> ***"I thank you sincerely for having recommended the milk cure to me. I often resort to it, and can praise it highly. If one were to acknowledge the existence of a number of diseases, the cause of which is not to be sought for in the remediable affections of certain organs, but rather in a Perverse Nutrition*** *of which we are unable to define either the extent or nature,* ***we must then admit the curative virtues of milk, and regard as a true advance in science the discovery that this aliment is an innocent, and at the same time efficacious, remedy for producing a complete change of nutrition."***

Two years after the above correspondence, viz., in 1863, Dr Niemeier wrote to me thus:

> ***"The enclosed epitome of the history of a case, will prove to you how highly I esteem the Milk Cure, and the results I have obtained by its use. Should you ever read a paper on this subject in your Medical Society, you can also refer to the results of your mode of Cure at the Tubingen Clinique. Your method was strictly carried out, and the patient lost 11 kg of his weight in 7 days. Under former modes of treatment he increased from 1 to 1.5 kg daily. These figures speak for themselves."***

The case which Dr Niemeier speaks of, as well as 3 similar cases, are adverted to in Schmidt's Inaugural Dissertation (Tubingen).

We shall now pass on to the consideration of my mode of treatment.

I generally commence the cure by employing milk alone, and forbidding all other kind of nourishment. I proceed with great caution in prescribing for the patient, 3 or 4 times daily, and at regularly observed intervals, half a tumbler or a tumbler, i.e., from 30 ml to 200 ml, of skimmed milk.

Its temperature must be made to suit the patient's taste.

They should not gulp it all at once, but take it slowly and in small quantities, so that the saliva may get well mixed with it.

The milk must be of good quality. That of town-fed cows has generally an acid reaction; that of country-fed cows is better, because its reaction is generally neutral. If the patient digest the milk well, which is proved by the fæces becoming solid, I gradually increase the dose.

The first week is the most difficult to get over, unless the patient has a strong will and firm faith in the cure.

During the second week 2.250ml are generally administered each day.

If the cure take its regular course, then the milk must be drunk 4 times daily, at 8 in the morning, at noon, at 4 P.M., and at 8 P.M.

If the patient desire it, I change the hours, but I always insist on regular intervals being observed; for the patient will think lightly of the cure, if he be not ordered to observe some regularity while subjected to it.

No confidence can be inspired, and no cure expected, if the physician says to his patient:

> *"Drink milk in whatever quantities, and whenever you wish."*

When obedient to the physician's orders, the patients complain neither of hunger nor thirst, although the first doses appear very small to them.

If, instead of 4 cups of skimmed milk, a person afflicted with a severe illness takes 4 large tumberfuls of unskimmed milk, you may be sure he will not digest it, and his confidence in the remedy will be shaken at the very commencement.

Chronic Gastro-Enteritis

I was consulted 6 years ago by Mrs B., she had been **suffering for 4 months from Chronic Diarrhoea, and from Vomiting.**

The disease was called Chronic Gastro-Enteritis by some.

The patient was emaciated, and her liver undergoing fatty degeneration.

She had suffered a long time from uterine and intestinal hæmorrhages.

In a consultation which I had with 2 experienced practitioners, I proposed the Milk Cure as the "Refugium Unicum" in this case.

The 2 gentlemen replied that they had tried it several times, but that the lady could not digest it.

I knew from what they said that the patient had partaken of milk in large doses several times daily, and had beef-tea and other food besides.

We resolved to try the methodical administration of milk.

I ordered skimmed milk to be given 3 times (each dose containing 4 tablespoonfuls) during the 1st day, and absolutely nothing else.

From that time the vomiting ceased, and after the 3rd day the diarrhoea disappeared.

The fæces acquired their normal appearance, which had not been the case for years before. At the end of the second week she could digest, without inconvenience, 2 bottles of milk a day.

Finally, she made a complete recovery, and lived several years.

But it must not be supposed that such an effect can generally be produced when nothing is administered except small doses of milk.

I have placed patients, who were taking milk in minute quantities, also on beef-tea, bread, and water; but I never observed the same satisfactory results after this mode of treatment.

The cure never was complete when allowed anything except milk to be taken. Sometimes, when the invalid had arrived at taking from 10 to 12 glasses per day, I observed a return of his illness.

I had then to commence the cure anew, by prescribing milk in small doses.

At the beginning of the treatment, the patient's bowels are frequently constipated, which I consider of good augury.

The fæces become very hard, in consequence of the absorption of the fluid particles of the milk.

This may be remedied by warm water injections (enemas), or by the use of castor-oil, or rhubarb.

Persons suffering from flatulence are soon relieved of it by the milk cure.

If the Constipation be obstinate, I order the addition every morning of a little coffee, or, towards 4 PM, stewed prunes, or a roasted red apple.

If, on the other hand, Diarrhoea and Borborygmi (noise from the movement of fluid and gas in the intestines), be the result of this mode of cure, it proves either that the milk was too rich, or that it has been administered in too large doses.

If the diarrhoea does not arise from ulceration of the intestines, it is sure to be cured by strict observance of method in this treatment.

Feverishness is no contra-indication to its use.

If the patient feel very thirsty, I allow him to drink water.

If he have a strong desire for solid food, I allow him, at the end of the second or third week, a little stale rye bread with salt, or a small piece of salt fish.

At 4 o'clock, i.e., his dinner-hour, the patient may, as in the morning, take a small quantity of stale rye bread.

Once a day, instead of pure milk, I give him some porridge made of milk and Steel Cut Oatmeal. After continuing this treatment for 5 or 6 weeks, it may be modified (according to circumstances), by our allowing only milk 3 times daily, and once chicken.

The strongest opposition to treatment I have generally experienced from the patients themselves, and the cause is easily explained .

If a person, suffering from some chronic ailment, has already been subjected to various modes of treatment without having been cured by any one of them, and if the milk cure be suggested to him, which, in his opinion, can lead to no improvement, he thinks it is the same as a verdict which declares: "You are lost, and medicine cannot save you!"

I have sometimes seen nervous patients grow seriously alarmed, and request time to reflect whether they should subject themselves to the treatment or not.

Thus the patients either assert that milk is repulsive to them, or that they are unable to digest it, this one, because he has always been troubled with his liver; another, because he smokes; while a third is afraid he will die of hunger, or pretends that he has already tried the milk cure, but was unable to continue with it, because of the disagreeable effects it produced.

Others ask what purpose the milk cure can serve, when other medicines have done little, if any, good.

My answer then is, that milk is a food easy of digestion with every person, provided it be given with precaution, that it be of good quality, and administered in definite doses; that **it is the first food of man, and that a new-born infant shows no dislike to new milk. To die of hunger, even when taking nothing but milk, is impossible, since there are people who take no other nourishment.**

In milk are united all the elements necessary for the nutrition of our body, and besides this substance is easily assimilated.

Long experience has convinced me that milk is an energetic remedy in many diseases, and that in some cases I prefer it to any other remedy.

Thus I am rarely unable to persuade the patient to follow out my advice; and in the majority of cases, notably those of Oedema, I have generally had the satisfaction of receiving, in a very short while, the sincere thanks of the patient for the speedy relief he felt.

There can be no doubt that if a man, instead of consuming all sorts of food, as is generally the case, were to confine himself to the most natural and simple diet, he would be placed under totally different conditions of health.

He could not, after a certain time, remain what he was before.

I go even further: for I hold that, among all the alterative and modifying methods, there is none which offers, a priori, more certainty of working a complete change in the constitution of a patient than milk.

Although the results of similar researches ought to prove of paramount interest to me, yet I confess to a suspicion that few explanations will go beyond what I have just stated with regard to milk, namely, that it has a peculiar influence on, or is in fact to a certain extent, the controller of absorption, of excretion of the animal heat, etc., in those cases which have been successfully treated by it.

For although we may thoroughly understand the physiological effects of a remedy, yet it by no means follows that such knowledge will always serve as an indication for its use in any given case.

I do not think I could name a single medicine which by the above-mentioned means has gained the confidence of practical physicians.

I now arrive, by way of conclusion, at the indications and contra-indications of the milk cure, for it is by determining these, that I shall give a practical turn to this essay. In this respect, I shall confine myself to simply adverting to the natural results of the many facts, empirical and therapeutic, already referred to.

And it is the path that should always be followed to advance the Science of Therapeutics, a subject unfortunately much neglected by morbid anatomists, and by many eminent Clinical Teachers of our day.

Summing up the phenomena always observed among the patients cured or treated by other physicians and myself, I must enumerate:

An intractable State of the Blood, impoverished to the utmost extent, and general Dropsy (Oedema); disordered innervation, assuming the forms of Hysteria, or Hypochondriasis; obstinate Dyspepsia (Indigestion), neither the result of congestion of the stomach nor of ulceration, nor of cancer of that organ; in fact, catarrhal, rheumatic, and gouty affections, as also nervous maladies not the result of a local disease, but of quantitative and qualitative defects in the fluids; or, to speak more clearly, a constitutional disease.

If the cause of the disease was apparently situated in the organs of digestion, the more strongly was I tempted to try this cure.

I have thus cured, or very much relieved, chronic irritations of the pharynx and of the oesophagus, ulcers of the stomach, and similar diseases of the digestive tract. These gastric cases formed the greater portion of the 200.

Among these, satisfactory results were obtained in a very short time.

The desponding patient became lively, the gloomy countenance brightened up, the big belly decreased in size, and, as a consequence, many other unpleasant symptoms disappeared; in a word, the patient felt quite a new man.

And even where the seat of the malady was not always as clear as in the cases above cited; but where the disease of any organ seemed to be connected with some derangement of the Digestive Tract, I have invariably tried the milk cure.

For I thus produce a good result, simply by regulating the diet, and by excluding indigestible articles of food.

And I have thus frequently had the satisfaction to see a complete cure effected by such simple means in cases where deep-seated organic disease was suspected.

My own experience, and that of other physicians, has shown that great improvements, and even almost **a complete feeling of health, have attended this treatment, when employed in cases of organic disease of the heart, of advanced degeneration of the kidneys, etc.**

Taking into consideration the fact that hypertrophy of the heart and the central congestion, as well as increased bronchial secretion which result therefrom, are frequently occasioned by disorder of the abdominal circulation, I think I have found an exact indication for the milk.

I have modified the milk cure according to circumstances in treating plethoric persons (having excess).

The fatty degeneration of the arteries, and the consequent friability being so frequently one of the determining causes of apoplexy (hemorrhage into an organ cavity or tissue), I think we shall find an exact indication in that disease for the use of milk.

Neither can I say that constitutional debility was common to all patients whom I placed under the milk cure.

On the contrary, I have made persons of a florid complexion undergo the treatment, persons of muscular build and a full pulse, who are generally ordered a temperate regimen, and who, to prevent congestion and apoplexy, take bitter and saline solutions with benefit.

Fever is no contra-indication to its use.

The utmost caution, however, should be used when milk is administered in such cases. At the commencement the doses should not be increased too speedily, for the patient's stomach will not absorb more milk than it can digest.

I feel no hesitation in declaring that the number of cases for which I prescribed the milk cure, with a great degree of confidence is very considerable, and that in these cases, I could have expected no good results had I resorted to any other mode of cure.” - Dr Philip Karell, MD, physician to the Emperor of Russia, in “On the Milk Cure”, Edinburgh Medical and Surgical Journal, August 1866.

The chief beneficial effects derived from the milk regime are due to its influence upon the alimentary canal; in other words, as will be shown later, to its influence in changing the intestinal flora.

The idea developed by Tissier and Metchnikoff, that the intestinal flora must be changed for the purpose of getting rid of the chronic intestinal poisoning, which lies at the foundation of the majority of chronic diseases, was, however, too rational and practical a notion to be abandoned.

Among the changes accomplished by the methods herein outlined, are the following:

1. The pernicious poison-forming and disease-producing bacteria, are made to disappear, or at least are so greatly reduced in numbers that they cease to exercise a pernicious influence.

2. The putrefactive and other "wild" bacteria, that under ordinary conditions produce in the colon and lower part of the small intestine great quantities of highly virulent poisons, which work enormous mischief in the body, under the new conditions established by the regime described in subsequent chapters, cease to produce poisons and produce harmless acids, chiefly lactic and acetic acids instead. In other words, the "wild", mischief-making bacteria are tamed or domesticated, and behave like friendly organisms, assuming a protective action essentially the same as that of the Bacillus Bulgaricus and other lactic acid-forming organisms.

3. A further change that is effected is the substitution of organisms of a positive beneficial character for the "wild" and pernicious bacteria which throng the intestine in conditions of Toxemia and overwhelm the body with noxious products.

That is, the pernicious bacteria which render the change of flora necessary are by the methods here presented:

1. Eliminated or greatly diminished.
2. So changed that their action becomes beneficial instead of pernicious.
3. Displaced by vigorous strains of friendly organisms, the B. acidophilus, B. bifidus and B. Bulgaricus."

To achieve the best results it is a good plan to place the patient under preliminary treatment for a few days before beginning the milk regime.

During this period, the length of which may vary from 2 to 10 days, special efforts should be made to get the patient's bowels operating freely.

The bowels should be made to move 3 or 4 times a day.

If necessary, an Enema at 29 C. to 24 C. may be administered daily for a time until normal action begins. In many cases, especially when the tongue is much coated and when other evidences of pronounced Intestinal Toxemia are present, the "Fruit Regime" may be employed with great advantage as a preliminary to the "Milk Regime." The writer has found this plan of greatest service.

After 3 to 5 days of fruit regime the milk regime is instituted.

Milk is deficient in iron, and contains an excess of proteid and lime.

Cow's milk disagrees with many persons, children as well as adults. It is certainly by no means an ideal food for adults.

Yet many persons are marvelously benefited by its temporary use when proper precautions are taken. The first essential is that the milk should be taken in large amount, so large as greatly to excess the needs of the body, and thus fill the alimentary canal with material which will promote the growth of friendly bacteria.

A second essential is that the milk shall be taken often.

A 250 ml every 30 minutes is the usual plan.

This makes it possible to take into the stomach the 5 litres for one day's ration.

It is also important to maintain a constant stream of fresh material passing along the alimentary canal, so that a considerable portion may reach the colon undigested and unabsorbed.

It is especially important that a sufficient amount of milk sugar should reach the colon unabsorbed to maintain in the colon a state of acid fermentation, thereby preventing putrefaction and changing the intestinal flora.

This is, indeed, in many cases, the chief benefit derived from the milk diet.

An important fact pointed out by Magnus-Levy is that:

> *"The absorption of the various forms of sugar in the intestine proceeds with unequal velocity. This observation, which has been made repeatedly on animals Weinland has found to hold good for man (Nagano); maltose and dextrose disappeared completely in 1 hour whereas only 26% of milk sugar, present originally in equal quantity and in the same concentration as the maltose and dextrose, was absorbed during the same period.*
> *To encourage the acid fermentation in the colon, it is well to give at each alternate feeding yogurt or buttermilk; or milk soured by the Bulgarian ferment may be taken at each feeding. It is still better to give with each glass of milk a half ounce of a mixed culture of B. Bulgaricus and B. Travisicus."*

Milk ferments but does not putrefy.

This fact has been established by Hirschler, Rivighi, Schmitz, Eisenstadt, and many other observers.

That fact that milk also "arrests or diminishes intestinal putrefaction accounts for its absence in milk diet" (Czerny).

As a matter of fact, however, **milk may encourage putrefaction if constipation coexists. This is due to the fact that undigested curds remain in the colon after the sugar of milk has been wholly absorbed, so that its protective influence in supporting acid fermentation is lost.**

Feedings being at 7:00 am and end at 7:30 pm - 25 feedings in all.

At 10:00 am and 4:00 pm the milk is omitted and a meal of fruit is taken instead.

The purpose of this is to encourage bowel activity, since **very free and frequent bowel movement is essential to success.**

The disappointing results often encountered in the use of the milk diet are chiefly due to the constipation, which is likely to be produced in many persons,

the natural result of which is intestinal toxemia and an aggravation of the very symptoms from which relief is sought.

60 grams of sterilized wheat bran or an 45 grams of agar-agar should be taken daily in 15 grams doses, preferably at 7:00 am, 11:00 am, 3:00 pm and 7:00 pm feedings.

When the period of exclusive milk feeding is ended, a laxative and strictly antitoxic diet must be adopted.

It should be remembered that: **The chief advantages of the milk regime, is a mean of changing the intestinal flora.**

1. in the large amount of milk sugar that by this means is carried into the colon and there, fermenting, produces lactic acid and so prevents the growth of the putrefactive bacteria;

2. in the frequent bowel actions induced. The soft curds, undigested and unabsorbed, by their bulk as well as by their acidity stimulate peristalsis to such a degree as to cause several bowel of movements daily.

In cases in which mechanical obstacles to bowel action exist, such as incompetency of the ileocecal valve, or adhesions of the pelvic colon, constipation may continue in spite of the largest quantities of milk that can be taken.

Coated Tongue

The colon should be emptied twice daily by the Enema.

When colitis is present, the warm Enema 32 C. -37 C. should be used; in other cases the cool 29° C. — 21° C. is preferable.

When the bowels begin to move naturally and the stools are no longer putrid, the Enema should be used at bedtime only.

This should be continued until the tongue becomes clean.

Care of the Mouth

The mouth should be cleansed by rinsing well with water after each feeding.

It is well also to rinse the mouth several times a day with cinnamon water.

Add 2 teaspoonfuls of cinnamon essence.

Fill the bottle half full of water and shake vigorously 2 or 3 minutes.

Shake each time before using.

Exercise and Baths

Feeble patients who can not exercise should have automatic exercise after the first week. Those who are able to do so, should walk a definite distance daily - the first day, 100 metres; the next, 200 metres; the next day, 400 metres; so increasing the distance each day up to 5 or 6 kilometres.

The full distance need not be walked at one time.

Not on any account must the patient be allowed to become greatly fatigued.

Swimming, and various special exercises, and exercises upon the inclined plane are of special value. **An Electric Light Bath may be given daily with advantage.**

Sweating should continue only 3 or 4 minutes and should be followed by a cold towel rub or a cold shower and Massage.

The Results

The Tongue Becomes Clean, Breath Sweet, the Stools are No Longer Offensive, and usually have a yellow colour, and little odour or a slightly sour odour. This change is generally observed within 7 or 10 days, and even sooner When The Bowels Move Very Freely.

The Skin Clears, the Blood Improves, the patient Gains in Flesh, often a pound a day, and the old Depression, Headache, Mental Dullness, and Other Miseries; Are Replaced By a Sense of Energy, and Well-Being.

The transformation of the patient from a poor, emaciated, despairing invalid to a plump, rosy-cheeked, bright, forceful person, ultra-pimp is often so rapid as to seem almost miraculous. This rejuvenating process sometimes continues for 2 or 3 months if the regime is faithfully carried on and modified to meet the patient's changing needs. Taking the milk too rapidly is a frequent cause of gastric disturbance.

It is of the highest importance that the milk should be taken slowly as directed.

Experiment shows that when milk is taken in this way, the amount of saliva mixed with it is several times as great as that when it is swallowed as one ordinarily drinks water.

It must be taken as a calf or an infant takes it, with a sucking movement, which insures proper insalivation.

Milk requires a liberal admixture of saliva to insure normal digestion.

In some cases, it is found necessary to take the milk warm, or at a temperature near that of the body, 39 C..

When taken at this temperature, the stomach seems to relax more readily to accommodate the milk.

When taken cold, a certain sensation of fullness in the stomach due to failure of the stomach to relax sometimes leads the patient to protest that the stomach is already full and can not receive more.

This sensation usually disappears at once when the milk is taken warm.

In heating the milk, care should be taken not to raise the temperature above 46 to 49 C. A higher temperature is likely to injure the vitamins, which are highly essential to the most favourable results.

In certain cases in which the stomach is sensitive to fats, it is found advantageous to give skimmed instead of full milk, or milk from which a part of the cream has been removed.

Similar results may be obtained by diluting the milk with water.

Patients sometimes complain of inability to take milk because of the formation of quantities of gas that distend the bowels and produce discomfort. The cause of this is Stasis. If the intestinal contents are delayed in some part of the alimentary tract, and as a result of the stagnation, fermentation with the formation of gases occurs. The worst cases are those in which incompetency of the ileocecal valve exists. This condition is usually associated with prolapse, with adhesion of the pelvic colon or a spastic condition of the descending colon, or both these conditions together.

In many cases there is in addition a sacculated state of the cecum, the so-called movable cecum of Wilms or adhesions of the cecum.

The gas accumulation is in both the colon, and the small intestine when the ileocecal valve has become incompetent.

The gases naturally force their way back into the small intestine and the distension of the abdomen is most pronounced in the region of the umbilicus.

In certain cases the tongue becomes thickly coated a few days after the beginning of the milk regime.

The appearance of the tongue may be white, brown or yellow.

The surface is usually moist.

The breath is sometimes fetid and has a strong fecal odor.

In these cases, the cause of the coating of the tongue, is usually Stasis in the Colon and Putrefaction with the consequent absorption of toxins.

In the majority of cases there is an incompetent condition of the ileocecal valve, resulting in the backing up of fecal matters into the small intestine, where putrefaction poisons present are readily absorbed.

The coated condition of the tongue is due to the fact that when the blood is charged with toxins, the resistance of the blood and other fluids is lowered, the saliva loses its power to inhibit the growth of micro-organisms, and the mouth becomes an incubating chamber in which molds and bacteria of various sorts grow luxuriantly.

When the bowels become active, moving 3 to 5 times a day, the tongue soon clears off.

The Colon Should be Cleansed by Enema Once, or Twice Daily.

Fruit Regime Before Milk Regime

When the tongue is coated at the beginning, it should be gotten clean or nearly so by a course of Fruit Regime, for a few days before beginning the Milk Regime. When the tongue becomes clean or nearly so, the breath sweet, and the stools comparatively free from odour, the patient is ready for the milk regime.

In some cases, it is best to interrupt the Milk Regime, and put the patient on a Fruit Regime for a few days until the tongue clears, then resume the milk.

If the patient is put upon a Milk Regime without having the preliminary Fruit Regime, he is much more likely to suffer inconvenience from the use of milk, and frequently nausea, vomiting and constipation occur; the patient gets discouraged and gives up the attempt.

This rarely occurs when the patient is properly prepared by means of the Fruit Regime, which lessens the putrefactive flora and gets the bowels moving.

Perhaps the most frequent and the most serious obstacle in the way of milk feeding is constipation.

If milk is taken in small quantity, constipation is certain to result.

It is only by taking milk in quantities sufficiently great to furnish a large residue of undigested curds that constipation may be avoided.

In fact, in cases in which the colon is greatly crippled by adhesions, dilatation of the cecum, incompetency of the ileocecal valve, prolapse and incarceration or adhesions of the pelvic colon, or a spastic condition of the descending colon, it is often impossible to secure proper activity of the bowels by the use of milk alone. Constipation may best be overcome by the use of substances which afford bulk without presenting to the digestive organs elements which require digestive work.

Cellulose, convenient in the form of agar-agar or bran, is the element provided by Nature for this purpose.

Lubrication is required in most cases in which chronic constipation has long existed, for the reason that the intestine has ceased to produce the normal quantity of lubricating mucus.

Advise Against Fasting

In modern times, fasting has been, at various times, greatly extolled as a panacea for nearly all chronic disorders.

Various professional fasters as well as fasting animals have since that time been studied by physiologists in different parts of the world.

The uniform testimony of these expert observers has been that the withholding of food does not exercise the prompt control over intestinal putrefactions that might be expected. It is true that under ordinary conditions, putrescible food remnants furnish material for promoting an abundant development of putrefaction organisms in the colon.

On the other hand, food is not the only source of putrescible material in the colon.

The bile, intestinal mucus, and other intestinal secretions that are constantly poured into the alimentary canal furnish a sufficient amount of putrescible material to maintain a luxuriant putrefactive flora.

When these materials are promptly discharged from the body, there is not sufficient time for the development of the putrefactive process, which requires much more time than is needed for the development of the fermentative process to which carbohydrates are subject.

In fast, however, there is almost complete inactivity of the intestine.

Food is the natural excitant of peristaltic activity.

Whenever food is taken into the stomach, active contraction waves begin at once, traversing the stomach at the rate of 3 to 5 a minute, and passing along down the whole alimentary tract.

When food is withheld, these movements cease, the biliary and other excretions accumulate and undergo putrefaction; the poisons are absorbed; the tongue becomes coated; the breath foul; the urine is loaded with the products of putrefaction and all the evidences of Intestinal Autointoxication become intensified.

In the case of the faster Cetti, observed by Lehmann, the first stool after the beginning of the fast occurred on the 9th day.

The amount of phenol, a putrefaction product, found in the urine had increased in the meantime to nearly five times the amount present at the beginning of the fast.

The condition of the urine was the same as that which is usually observed in cases of obstruction from peritonitis or other causes, the result of the paralyzed condition of the bowel due to complete abstinence from food.

Examinations of the urine of Succi, the famous Italian faster, made by Apollo and Solard by Bouchard's method showed its toxicity to be greatly increased.

Horace Fletcher, who fasted 17 days, found at the end of that time the evidences of Autointoxication so aggravated that he was compelled to terminate the fast.

Some years ago a man who had fasted for 3 weeks, consulted the writer on the 21 day of his fast.

He had begun the fast for the purpose of getting rid of a foul tongue, **a bad breath and various disorders which were clearly the result of Chronic Intestinal Toxemia.**

He was **disappointed in finding that all his symptoms had become worse instead of better. His tongue was very heavily coated, his breath very foul, he was sleepless and greatly depressed and nervous.**

On inquiry it appeared that his bowels had not moved once during the entire 1 weeks.

A saline laxative was administered at once, and within 24 hours the patient had several large and horribly smelling stools and was greatly relieved.

Some who have taken very long fasts maintain that if the fast is continued long enough, the tongue after a time clears off, appetite returns and a very great physical and mental renovation is experienced.

Possibly in such cases the enormous number of putrefactive bacteria retained in the body undergoing digestion and absorption may produce an effect similar to that following the use of bacterial vaccines, conferring a temporary immunity, such as one sees in the convalescence of typhoid fever and some other intestinal infections.

But this favourable result is uncertain and a number of cases have been reported in which patients have died while waiting for the tongue to clear and the appetite to return.

It is probable that in the most favourable cases the benefit derived from prolonged fasting is obtained at the expense of more or less permanent injury to important vital organs, and that great and unnecessary risk of serious vital damage is incurred.

Starvation suspends the secretion of the digestive juices:

> ***"The secretion of saliva diminished in acute starvation, even when water was taken ad libitum. Thus, Succi, on the 7th day of his fast, only produced as much saliva by the movements of his jaws in 3 hours as under ordinary circumstances is secreted in 5 minutes."*** *- Von Noorden*

In fasting, the stools are highly putrid and "similar in appearance to the feces passed when the diet is mainly composed of meat" - Von Noorden

Says the same author:

"The blood atrophies", Statkewitsch studied the effects of fasting in a large number of animals - cats, dogs, rabbits, pigeons, frogs, lizards, and other animals - and found that after prolonged fasting the cells of the heart, liver, muscles, kidneys, pancreas and other glands were the seat of degenerative processes.

These processes were most marked in the muscles and the glands.

Zander found evidences of degeneration of the heart muscles in pigeons after fasting 8 to 12 days.

Gaglio found cloudy swelling of the muscles, granular and fatty degeneration of the liver in fasting frogs.

The Fasting Body Feeds upon Itself

So long as life continues, the fasting animal body continues to consume energy although at a reduced rate.

The energy output of the body during fasting is 3/5 to 3/4 the ordinary output.

In the absence of the usual source of energy, food, the body feeds upon itself.

The body is consumed at the rate of about 1/80 of its weight each day.

The stores of fat are first drawn upon, then the muscles, glands and other structures are consumed to keep the fires of the body burning.

The heart muscles, and some other organs may lose as much as 50% their weight. This process of degeneration may be carried so far that the body can not recuperate itself.

According to the Lancet, the professional faster, Succi, although only 38 years of age, had the appearance of a very aged person; not only his face but his entire body was covered with deep wrinkles.

His muscles were so atrophied and degenerated that he looked like a skeleton and had the appearance of a person suffering from incipient marasmus.

It is evident that to submit such a person to an ordeal by which he would lose 13 or 18 kilos in weight, involving the destruction of half his muscular structures and nearly an equal proportion of many of the most important vital organs, for the purpose of eliminating 1.5 kg or 2 kilos of waste materials that may be easily gotten rid of otherwise is, in the highest degree, irrational.

There are much easier, safer and more efficient means of getting rid of accumulated body wastes.

And so, the writer feels no hesitancy in condemning this practice as an unnecessary drastic, unsafe and dangerous method of combating conditions which are clearly due to Intestinal Toxemia.

The "fruit regime" is a fat-proteid fast.

More than this, the fruit regime keeps the bowels open and trains them into the normal rhythm of activity. The over-distended cecum contracts.

The spastic descending colon relaxes.

The liver and kidneys, no longer overtaxed, rapidly clear the blood of waste matters and toxins, and a feeling of well-being and fitness is experienced which is an index to the rejuvenating processes which are in progress in the blood and tissues.

That a diet from which animal proteids is wholly excluded is safe and competent is attested by all modern physiologists.

Says Prof. D. Spence, in Von Noorden's monumental work on metabolism:

> *"The old question as to whether the proteid of vegetable origin is in respect of value as a food-stuff equal to that of animal origin - whether omnivorous man, like the herbivora, could with impunity draw his entire supply of proteid from the vegetable kingdom alone, is in principle one which is already decided for us through the practice of those people who live exclusively on vegetable foods. Physiological investigation can therefore only supply the evidence that it is indeed true that the* ***vegetable-albuminous substances as they occur in nature are equal in nutritive value to an equivalent quantity of proteid of animal origin."***

Professor Milroy [Von Noorden's "Metabolism"] endorses and commends the **low-proteid diet as a means of prolonging life and increasing efficiency.**

But another element is necessary for the best results.

Soon after Metchnikoff called attention to the fact that the colon produces indol, skatol and other highly deleterious substances capable of setting up degenerative changes in the body when absorbed into the blood stream, Bienstock called attention to the fact that the colon bacillus is also capable of producing lactic acid and other acid products.

So while Metchnikoff condemned the colon bacillus as a cause of premature senility through the poisonous products of the putrefactive processes set up by it, Bienstock extolled the colon bacillus as an organism friendly to human life on account of the fermentation of carbohydrates caused by it.

A warm controversy was for years waged between the followers of Metchnikoff and those who followed Bienstock.

These divergent views were finally reconciled by Kendall, who as the result of a highly interesting research discovered that **nearly all the micro-organisms found in the colon, as well as many other pathogenic organisms, including the diphtheria bacillus, undergo complete change of character in the presence of carbohydrates, and set up fermentative rather than putrefactive changes, and produce only harmless acids instead of the virulent poisons, ptomaines and toxins that they produce when grown in a culture rich in proteid.**

These various observations made evident the important fact that the Intestinal Flora (Microbiome), may be changed in 2 ways:

1. **By suppressing the growth of putrefactive organisms.**
2. **By changing the character, or at least, the mode of activity of the colon organisms, without actually getting rid of the micro-organisms themselves.**

To effect this remarkable change by which the virulent poison-forming organisms are converted into harmless acid-formers, it is only necessary to supply the bacteria growing in the colon with an abundance of available carbohydrate.

The starch that thus escapes digestion is, of course, lost to the body as nutriment, but in supplying food to the billions of hungry colon bacilli that inhabit the lower segment of the intestine, it performs a protective function.

One more point to be noted in relation to the antitoxic diet is the avoidance of an excess of animal fats. Animal fats in large amount promote intestinal putrefaction. This fact was pointed out by Combe. **The interval between meals should be sufficient to afford the stomach an opportunity for rest. The gastric glands exhaust their energy by long continued activity, and need rest. The stomach requires disinfection after each meal. If no time is allowed for this, infection is likely to occur. The need for rest for disinfection has been clearly shown in the feeding of young children,** by Czerny and Steinitz (Von Noorden's "Metabolism").

The principles laid down by them in the following paragraph apply equally well to adults:

> *"As the power of human milk to combine with Hydrogen Chloride (Hcl), is less than that of undiluted cow's milk, so the antiseptic power of the stomach contents of the naturally fed child is greater than that of the artificially fed. Moreover, the system of 3 to 4 hour pauses between meals, especially advocated by Czerny, is supported by this fact. For since*

> ***in the case of healthy, naturally-fed children, free HCl appears in the gastric contents at the earliest in 1:15 hours, and in the case of artificially-fed children first in 2 hours,*** *a thorough disinfection cannot be attained without allowing a considerable interval. If this is not inserted between 2 meals, the stomach has not the time to disinfect its contents, and the way is thrown open to all possible invasions.* ***Czerny and Wachsmuth have also drawn attention to this defect, and have attempted to explain by its means the higher mortality of artificially fed children (often 20 to 1).”***

The emptying time of the stomach in healthy adults is 4:30 hours.

Allowing 1 hour for rest, and disinfection, the interval between meals for the average healthy person should be not less than 5:30 hours from the beginning of one meal to the beginning of the next.

Observing this rule, **it is impossible to eat more than 2 substantial meals in a day, without encroaching upon the sleeping hours.**

Nothing is more unphysiologic than to go to bed soon after eating a hearty meal.

Observations show that in persons suffering from constipation, even in latent form, there is a very great accumulation of material in the intestinal tract.

Increased frequency and completeness of bowel movement is nearly as essential for the restoration of a normal condition of the intestinal flora as regulation of the diet. The normal intestinal rhythm is 3 or 4 bowel movements daily, or at least 1 movement after each meal.

The chimpanzee and other of the larger apes move their bowels 3 or 4 times daily. I was informed by the animal keeper of the London Zoo that the large apes in that great collection uniformly move their bowels 4 times a day.

The small monkeys have more frequent bowel movements, they eat constantly.

The keeper of the big chimpanzee at the Washington, D.C., Zoo, states that 5 or 6 bowel movements daily is the rule with his big apes.

Doctor Hornaday, Superintendent of the Bronx Zoological Garden, informs me that the large monkeys in his collection move their bowels 3 times a day.

By correspondence with many missionary doctors practicing among primitive people in Africa and other foreign countries, I have learned that **the bowel habits of people living in a wild or primitive state are identical to those of higher apes.**

The average adult American is suffering from Intestinal Toxemia.

Women suffer more than men as a result of sedentary life and wrong habits of dress. It is difficult to find an adult woman who does not show more or less indication of Chronic Toxemia, though probably the majority.

The effects of Intestinal Toxemia are on the whole, quite as bad as those of alcoholic intoxication in its ordinary manifestations.

When the bowels move thoroughly 3 times a day, or after each meal, or better still, 4 times a day, once after each meal and on retiring or immediately on rising in the morning, the time during which the unused food residues remain in the colon is too short to allow for the development of advanced putrefaction

processes; and if the diet is of proper character, low in proteid, rich in carbohydrate, supplied with a reasonable amount of starch in its native state, the stools soon cease to show marked evidence of decomposition; the strong ammoniacal, putrid or rancid odors disappear, the stool has either a faint sweetish or slightly sour odor, and the black or dark brown color gives place to an orange or yellow color. In persons who are fairly normal, these changes may be brought about very quickly by regulation of the diet, and a voluntary effort to move the bowels after each meal; but in persons who have been chronically constipated for years, other measures are necessary.

Means must be employed to combat chronic constipation systematically and continuously.

It is not proper, however, to resort to the habitual use of laxative drugs.

All of these things do harm. They invariably aggravate the spastic condition of the descending colon almost always present.

Laxative drugs also produce an exaggeration of the anti-peristaltic movements, which begin in the transverse colon and travel backward toward the cecum.

These movements are natural during digestion but do not interfere with the periodical movement of the intestinal contents.

Colitis, rectal constipation, and especially the use of laxative drugs greatly exaggerate this anti-peristaltic action, and so increase the tendency to stasis in the cecum and the ascending part of the colon.

It appears to be more than probable that this exaggerated anti-peristalsis set up by mechanical obstacles to normal bowel function existing in the distal colon is the chief cause of dilatation of the cecum and incompetency of the ileocecal valve, which is brought about by the over-distension of the cecum.

In the great majority of cases of constipation, even very obstinate cases, in which a natural movement of the bowels has not occurred in many years, the difficulty may be quickly overcome by increasing the bulk of the food intake.

The modern diet in civilized countries is by far too highly concentrated.

The human intestine is adapted to a bulky diet. The average bill of fare leaves practically no residue after the digestive process is completed.

This fault may be easily corrected by the addition of sterilized wheat bran in sufficient amount and by the free use of fresh fruits and green vegetables.

Persons who have been for years constipated have crippled colons, the colon is dilated and elongated, its muscular walls are weakened by long continued over-distention, and the mechanical stimulus furnished by a very bulky dietary addition is essential. Such colons are also crippled by degeneration of the glands that normally furnish an abundance of lubricating mucus.

This is particularly true in cases in which the appendix is diseased or has been removed but is also true in practically all cases of chronic constipation.

The bran stimulates the bowel not by irritation, but by a sort of titillation, hastening peristalsis in both the small intestine and the colon, and by hurrying on the unused residues of each meal, leaving no opportunity for the

development of putrefactive changes. Bran also excites the intestine to action by distending it, and by the same means stimulates the activity of the glands which furnish the digestive fluids. If the bowels do not move 3 times a day, prompt measures should be taken to make them do so. Without being aware of the fact, all persons whose bowels move only once a day are Constipated.

The following suggestions have been thoroughly tested in the treatment of many thousands of persons suffering from constipation, and have been found to be effective.

1. The bowels normally move 3 or 4 times daily. Eating starts up active movements of the intestine, which naturally lead to a bowel movement after each meal. In the majority of persons, a bowel movement occurs soon after rising in the morning. With many persons, a bowel movement occurs just before going to bed. Frequent bowel movement which occurs naturally is not weakening, but wonderfully promotes vigor, endurance, appetite, digestion, and all that pertains to good health.

2. An effort should be made to move the bowels on rising, soon after breakfast, after each meal and on retiring, whether there is or is not a "call" for bowel movement, and at any other time when a slight "call" is experienced. A persevering effort should be made to secure at least 3 movements daily and at regular times.

3. Natural Food is the physiologic laxative.

4. The importance of bulk or undigested residue as an aid to intestinal activity is well shown by the facts pointed out by Spence who tells us that:

> ***"Herbivorous animals, like the rabbit, die when fed on food which leaves no residue.*** *Adult human beings are not so constructed that they can exist on diets which leave no residues. The importance of these foods residues is emphasized in the term 'intestinal scourers' that has been given to them. The carnivores, too, do not dispense with them willingly; just as they devour bones, so do the graminivorous birds that swallow sand, feathers, and the like." - Von Noorden's "Metabolism".*

Cellulose (the indigestible part of vegetable foods) is the only element that can increase the bulk of the feces in man.

The average person requires about 30 grams of cellulose daily.

In cases of chronic constipation a larger amount is required.

5. Agar-agar aids bowel action by **preventing drying and hardening of the intestinal contents and filling the intestine sufficiently to stimulate it to action.** The physiologists have discovered that the intestine possesses a peculiar kind of sensibility known as "muscle sense." **When the intestine is stretched, the muscle sense is stimulated and the intestine is thus made to act.**

6. The bowel requires lubrication. Normally a peculiar mucus secreted by the appendix and the colon furnishes sufficient lubrication. When the appendix or the colon have become diseased by long continued constipation or colitis, the glands are destroyed and the normal mucus is not produced in sufficient quantity to properly lubricate the bowel.

7. Green vegetables contains much cellulose. This is especially true of beet root, turnip, parsnip, spinach, cabbage, brussels of sprouts, and lettuce.

8. Exercise promotes bowel action, especially walking, horseback riding, calisthenics and such special exercises as trunk bending, leg raising, and deep breathing. Exercises and deep breathing movements taken on the inclined table are especially helpful and should be practiced several times daily.

9. Various other means are highly beneficial, such as Massage of the colon, vibration and kneading of the abdomen. In special cases, applications of electricity to the abdominal muscles, the rectum, the pelvic colon, and other internal applications render great service.

10. In cases in which the abdominal muscles are relaxed, and the colon and other portions of the intestine are prolapsed, an efficient abdominal supporter should be worn either permanently or until the abdominal muscles have become strong enough to hold the viscera in position.

11. Drugs of all kinds must be avoided. They do not cure, and do much harm.

12. The squatting position secured by using a raised foot-rest in front of the closet seat is a great aid to bowel movement, especially in cases in which the abdominal muscles are relaxed, a condition most common in chronic constipation.

13. In cases of constipation, many "kinks", folds, contractions, adhesions, displacements, and other impediments to normal bowel action are found, which may be corrected by the application of appropriate measures.

In by far the great majority, perhaps 90% of all the cases of obstinate Constipation, the seat of the trouble, may be definitely located in the rectum, at least in the last 2 segments of the large intestine, the rectum and the pelvic of the colon. The warm Enema, added to the other measures will rarely fail to keep the colon sufficiently well-cleared to prevent Toxemia. Colon Massage (deep digital), and sleeping on the left side are also useful measures.

In general, the following measures will be found of substantial benefit in connection with the Milk Regime:

1. **Baths**
2. **Massages**

After the first week the patient should begin methodical and carefully graduated muscular exercise.

The amount of work done must, of course, depend upon the patient's strength.

At first, the walking should be at a very leisurely rate, not exceeding 3 kilometres an hour.

As the strength increases, the rate may be gradually increased until the pace reaches the rate of 5 kilometres an hour.

This amount of exercise will not so greatly increase the consumption of food as to materially lessen the rate of gain, and may, in fact, increase the appetite and the rate of assimilation sufficiently to actually increase the gain in weight.

A matter of much greater importance is that by means of exercise, the growth of the muscular tissue will be encouraged so that the increase in weight will not be due simply to the accumulation of fat, but will include a growth in the muscular structures, a much more permanent and useful gain that the mere addition of reserve tissue in the form of fat.

Breathing Exercises, when properly taken, render the greatest service in promoting the movement of the milk from the stomach into the intestine, in encouraging bowel action and in promoting the absorption and circulation of the digested foods. The older physicians of the last century gave **great attention to the tongue** and associated its various appearances with certain disorders of the liver, such as "biliousness", and torpidity, and a variety of gastric disorders.

The opinion prevailed very widely at one time that a coated tongue indicated a deficient secretion of gastric juice and a clean red tongue the opposite condition; but the introduction of the Ewald test meal showed that a coated tongue was even more frequent in cases of hyperhydrochloria than in cases of hypohydrochloria.

As more accurate means of diagnosis have been developed in the study of gastric disorders, it has become more and more clearly apparent that no very close relation exists between disease of the stomach and tongue coatings.

The tongue, having been discredited as an indicator of gastric disease, has come to be neglected and treated as a matter of having little if any significance.

This has been true especially since Duran pointed out that a coated condition of the tongue is found in 85% all cases of disease, and since Mueller and Fuchs showed (1898-1900), that 62% of apparently healthy people have coated tongues.

A microscopic and bacteriological examination of the coating of the tongue shows it to be made up of epithelial cells, molds, yeasts and bacteria.

A potato culture medium inoculated with material gathered from a heavily coated tongue is in a few days covered with a luxuriant growth of molds, yeasts, and bacteria.

A great variety of organisms may be sorted out and among them are found the colon bacillus, the gas-forming bacillus of Welch, and various species of streptococci, pus-forming organisms, many of which are possessed of a High Degree of Virulence, and which May Give Rise to Pneumonia, Rheumatism, and other Systemic Diseases, to say nothing of Pyorrhea, Dental Caries, and various other Oral Disorders.

Significance of Coated Tongue

Before we can begin to understand the significance of the coated tongue, we must know how the tongue becomes coated.

Why is not the tongue always coated?

The bacteria, mold and yeasts, which are found in the "coating" are always being taken into the mouth, with the breath and the food.

Certain kinds of food, particularly and meats of all sorts, are swarming with bacteria. [He provided some impressive numbers; while cooking kills microbes, the toxins still remain.]

Ordinary street dust consist largely of bacteria, the mouth daily receives many millions of these organisms. Why do they develop as shown by the coating of the tongue in some persons or at some times and not in all persons and at all times?

The answer is simply this: **under perfectly normal conditions, bacteria may enter the mouth, but they cannot establish themselves and grow there.**

The healthy salive is able to prevent the growth of germs.

This property of the saliva derives from the blood. It is a part of the remarkable provision made by Nature by which the body defends itself against attacks of its microscopic enemies. The living cells and tissues of the body are endowed with power to defend themselves against bacteria. Bacteria introduced into the blood quickly disappear. They are combated by the opsonins and bacteriolysins, the white cells of the blood, the macrophags.

The lymph, and other fluids possess the same power to destroy germs and prevent their growth. The healthy mouth is constantly bathed with the saliva which, when it enters the mouth, is not a mere solution of digestive ferments, but is a living fluid containing myriads of cells which are capable of capturing and destroying bacteria in great numbers. This living fluid, teeming with macrophags, bathes every oral surface, the teeth, gums, tongue, fauces, findings its way into every nook and cranny of the mouth so that no part can escape its cleansing and disinfecting influence. In order that the saliva shall be efficient, it is necessary that the blood from which it is formed shall be in a normal condition with high resisting power.

If any condition is present which lowers the resistance of the blood, this fact may be revealed in the loss of the germ-destroying and inhibiting power of the saliva. When the resistance of the saliva is lowered, there is no hindrance to the growth of these parasites, or so-called "coating", appears upon the tongue.

It is for this reason that, as one medical writer says:

> ***"Most sick individuals have a coated tongue. This symptom indicates that there is something wrong in the economy."***

And the something wrong is lowered vital resistance.

The cause of this lowering of vital resistance is a flooding of the body with poisons in amount greater than it is able to destroy and remove promptly.

The source of the poisons may be various. They may be derived from Typhoid or Pneumonia Germs, or some other Acute Infection. There can be no doubt, however, that the most common and hence most important source of these resistance-destroying poisons is the bacteria in the Colon. In the Colon of a Constipated person, putrefactive bacteria are constantly producing in great quantities highly active poisons, among best known of which are indol, skatol, phenol (carbolic acid) and ammonia. A portion of these poisons is fixed by the intestinal mucous membrane; another portion is detoxicated by the liver; but when large amounts are produced during a long period, these protecting devices fail, and **poisons then accumulate in the blood. In consequence, the blood cells are poisoned**, the vital fluid is changed, its resistance is lowered, and every fluid derived from it, including the saliva, is likewise changed.

With these facts before us, it is not difficult to understand why 85% of all sick people have coated tongues and that 60% or more people apparently in good health have coated tongues.

The Constipation to which this condition is nearly always due is almost universal among civilized people.

The injurious effects of constipation are not always evident at first. So long as the natural defenses against these germ poisons remain intact, the blood is kept free from them and ill effects do not appear. But sooner or later these wonderful protective mechanisms become impaired and then the bodily resistance is rapidly lowered, the tongue becomes coated more and more, and a long train of mischief begins which ends in high blood pressure, hardening of the arteries, premature senility, Diokine's disease of the kidneys, and various other degenerative changes.

The close association of a coated tongue with constipation has long been recognized.

The old-fashioned doctors of the last century applied the term "Podophyllum tongue" to the well-known yellow or brown-coated tongue associated with the condition popularly designated as "biliousness" under the supposition that a disturbance of the biliary function is indicated.

In Chronic Colitis (Inflammation of the colon or the large intestine), the filtering power of the intestine is largely lost so that the absorption of toxins is increased, and the mucous membrane loses its power to retain indican and other toxins, and thus the Toxemia is increased.

From the foregoing it is evident that for practical purposes we may consider a thick persistent coating of the tongue to be an indicator of Toxemia due to Intestinal Stasis, or Stagnation.

In most cases, there will be found delay not only in the colon but in the small intestine as well. The cure is to be found in the suppression of intestinal putrefactions which are the source of the poisons.

This cannot be done by antiseptics, by cathartics, or by active drugs of any sort. These methods have been tried for centuries and are acknowledged to be inefficient. The Only Radical Cure is to be Found in so Changing or reforming the Intestinal Flora; that putrefactions will cease and thus the normal resistance of the blood and vital fluids may be restored.

Constipation Encourages the Growth of Infectious Bacteria.

When sufficiently numerous and virulent, these give rise to colitis. Colitis, if sufficiently intense, gives rise to adhesions, kinks, and diverticuli.

These conditions still further aggravate the Constipation, Toxemia, colitis, and the over-distention of the right half of the colon.

As a result, the ileocecal valve is made incompetent, infectious fecal matter is forced back into the small intestine, infections travel upward to the duodenum, the gall-bladder, the pancreas and even the stomach, and thus multiply more and more conditions that create or aggravate Intestinal Toxemia.

Metchnikoff placed the whole world under obligation to him for all time in his discovery that **the Flora of the Human Intestine Needs Changing.**

He pointed out one means of accomplishing this life and health-saving change.

He succumbed prematurely himself, perhaps because he failed to recognize the most efficient, obvious and practical of all means of combating intestinal putrefaction, namely, intestinal activity.

The **sugar of milk** is a special product adapted to the needs of the body.

It is found nowhere else in nature except in the milk of animals.

Milk sugar is slowly digested and is absorbed only ¼ as rapidly as malt sugar.

This enables it more easily to reach the lower intestine where it is converted into lactic acid and so prevents the putrefaction to which modern science has trace a great number of the maladies of both infants and adults.

It is due to the presence of lactose that milk sours, while meat putrefies.

Nearly ten years ago, I placed in a jar of buttermilk a raw beefsteak to which no antiseptic of any sort had been added. The beefsteak is still intact, thanks to the antiputrefactive properties of milk sugar and the acid-forming bacteria it feeds.

The reason for this antiputrefactive property of milk was discovered by Kendall of Harvard, who a few years ago demonstrated that **in the presence of sugar, even highly active putrefactive organisms produce harmless acids instead of noxious toxins and ferments.**

This is certainly a most beneficent provision of nature whereby the normal food of the young infant is kept in a wholesome state while undergoing the processes of digestion and absorption in the intestine.

In the caseid of milk is found material for growth and repair, and in a form favorable for prompt and complete digestion and assimilation.

There are also other proteids in milk which serve the same purpose.

Cow's milk is also rich in salts, containing 4 times as much of these mineral elements as does mother's milk.

Milk is particularly rich in lime.

A 500 ml of milk contains 11 to 16 grains of lime, more than is found in 500 ml of lime water.

Milk contains certain digestive enzymes or ferments, galactose, oxidase, and reductase which aid the processes of digestion. It is important to note, however, that this is true only of fresh milk which has not been sterilized by boiling. These useful ferments, like the subtle vitamines, are destroyed by heat. This may be easily shown by a simple experiment known as Storch's test for heated (boiled) milk. Shake 5 c. c. of the milk in a test tube with one drop of 2% hydrogen peroxide and 2 drops of 2% sol. paraphenaleine-diamin.

If the milk has not been heated, a dark violet color appears at once, but if it has been pasteurized or boiled, no color appears. Milk should be alive, or at least uncooked.

Pasteurizing, that is, heating to a temperature of 70 C. degrees, destroys the antibodies of milk.

When the milk is hearted to a temperature of 80 C., the digestive ferments which it contains are destroyed.

The boiling of milk modifies in a harmful way nearly all its ingredients and considerably reduces its nutritive value.

Rats fed on boiled milk grow to only half their normal size.

Scurvy sooner or later appears in babies exclusively fed on pasteurized or boiled milk.

The subtle alchemy by which milk is prepared in the laboratory of Nature is upset by the crude process of cooking.

Boiled milk will sustain the life of rats, but it will not enable them to grow to full development, and reproduction fails altogether.

Science is teaching us every of the day that the fine adjustments and adaptations of nature cannot be safely ignored.

We are gradually learning through the loss of millions of lives which have perished through our ignorance that the foodstuffs which nature designer for our use are not the haphazard products of wild and incoherent forces, but are wrought out by a subtle and infinite wisdom which fits them to our needs so perfectly as to transcend our highest knowledge and defy the profoundest analysis.

Another matter of much significance which must be borne in mind in relation to pasteurized milk is the rather surprising fact that, if not handled with care, **pasteurized milk is likely to develop within a short time more bacteria and bacteria of a more dangerous type than are found in ordinary raw milk.**

The reason for this is that most of the bacteria found in ordinary raw milk are of the acid-forming sort; that is, they are of the kind that are commonly known

as buttermilk or sour milk germs, so-called friendly or protective germs.

So long as these bacteria are dominant, the growth of putrefactive germs in the milk is prevented.

These acid-forming germs are destroyed by the pasteurizing process, but the spore-forming putrefactive organisms are not destroyed and hence grow with greater facility in milk which has been pasteurized than in milk which has not been pasteurized.

It is evident that pasteurization does not solve the milk problem.

When scientifically done, pasteurization does mitigate some of the evils associated with unclean milk but the only true solution for the problem is clean milk. Milk must be eaten, not swallowed as a beverage.

It must be chewed. All foods need to be masticated.

The calf, and the nursing infant, chew the milk which they draw from the maternal font. The movements of the jaws and the sucking movements executed by an infant in nursing induce an abundant flow of saliva which, mixing with the milk, properly dilutes it, and to a high degree promotes its digestion.

Milk when swallowed rapidly as a beverage is likely to form in the stomach large and hard curds, which are very slowly digested.

Many persons who suffer from taking milk in this way imagine themselves unable to take milk and so abandon its use.

I remember a man to whom I had recommended the liberal use of milk.

He protested that he was absolutely unable to use it at all, and state that on the last occasion on which he had taken milk, he had nearly lost his life.

A few hours after hastily swallowing several glasses of milk, he experienced a sensation of suffocation, was then nauseated and on attempting to vomit, experienced a choking sensation.

On reaching his finger down his throat he felt a mass which he seized, and to his astonishment drew out a rope of milk nearly a yard in length.

The milk had formed in his stomach one large hard curd, which he was fortunate in being able to get rid of.

The famous English surgeon, Dr Lawson Tait, told me of a case in which he was obliged to perform a surgical operation to remove a similar mass of curds which had lodged low down the intestine.

Milk should be sipped slowly and with a sucking movement or taken through a straw so as to secure liberal admixture of saliva.

By this means, the formation of hard, indigestible curds may be prevented.

Milk must be taken in right quantities and in right combinations.

It cannot be denied that milk digests better when taken by itself or in very simple combinations than when mixed with a large variety of other foodstuffs.

In some instances, also, a large quantity of milk is more easily digestible than a small quantity.

When the stomach produces a large amount of highly acid gastric juice, as is usually the case with persons who have been accustomed to a hearty meat diet, the curds formed when a small amount of milk is taken will be large and tough, whereas if a larger amount it taken, the curds formed will be smaller and softer.

Pavlov, the St. Petersburg physiologist, showed that meat requires a highly acid gastric juice for its digestion, and that the stomach produces this sort of juice when meat is eaten, while milk demands a juice low in acid.

When milk is largely used as a nutrient, the balance of the diet should consist chiefly of fruits and vegetables for the reason that milk contains an excess of lime and is deficient in potash and soda, which are necessary for perfect human of nutrition.

The last named elements are abundant in fruits and vegetables, particularly in the potato skin which is also very rich in salts of potash.

In the use of milk, it is well to remember, also, especially when it is freely taken, that one may easily by this means ingest an excess of fats.

The milk of certain breeds of dairy cattle is exceedingly rich in fat.

The use of such milk in some persons, and especially in infants and young children gives rise to symptoms which are sometimes denominated biliousness, but which are not directly connected with the liver, being due to putrefactive changes set up in the intestine by the presence of excess of fat.

A Person May Be Sensitized to Milk

Another point to which attention should be called in the interest of both infants and invalids is the fact that certain persons become sensitized to milk (usual manifestations are asthma, rhinitis, dermatitis), as well as to other forms of proteid, and to a person who is sensitized, even the smallest amount of milk gives rise to highly poisonous and even fatal symptoms.

The milk should be given first in small quantities, a teaspoonful in a half glass of water, the proportion being gradually increased until the proper dilution is reached.

The same method should be pursued with individuals who have learned by experience that unpleasant symptoms are noted after the use of milk.

The adult or infant who is sensitized to milk may be cured by the administration of milk in graduated proportions, beginning with extremely small doses. For many years the writer has realized the great value of whole grain rice in certain pathological conditions.

In Louisiana, an exclusive whole grain rice diet for a few days is the popular remedy for indigestion due to over-indulgence of the appetite.

Dr H. D. Bulkley, the famous skin and cancer specialist of New York City, has for many years recommended a whole grain rice diet as almost a specific for eczema, and certain other forms of skin disease.

In the writer's experience, rice is a most valuable food remedy in conditions in which there is marked irritation of the buccal or gastric mucous membranes.

It must also be remembered that rice is almost wholly lacking in iron and lime. For this reason it must be supplemented with purées of greens in cases in which the rice feeding is long continued.

Autointoxication: The Cause of Goiter in Pigs

"It has been believed for some time that the thyroid gland serves as a detoxicating agent, and that the hyperplasia results from stimulation to the gland to produce more and more colloid for purposes of detoxication.

Such an hypothesis must assume that the Iodine compound produced by the thyroid is, under conditions of high toxicity, either eliminated from the blood stream at a more rapid rate than normally, or is insoluble in the blood stream and cannot transfuse the placental wall.

It assumes that there is just as much Iodine coming into the blood stream through the intestinal walls, as under normal conditions.

If this is the case, however, it is difficult to comprehend why there should be a deficiency of Iodine for the fetal thyroid unless we assume, as stated above, that there is a more rapid elimination of Iodine compounds, or the formation of Iodine compounds insoluble in the blood.

The wonderful avidity of thyroid tissue for Iodine, as lately demonstrated by Marine and Feiss, and Marine and Rogoff, makes it appear more than probable that it is not, at least in all cases, a deficiency of Iodine in the feed per se, that is the primary cause of thyroid hyperplasia in swine producing hairless pigs, but that the problem is more complex and related to the absorption of Iodine from the digestive tract or by the thyroid gland itself.

It has already been made clear by the work of Marine, and others that the Enlarged Thyroid, accompanied by the symptoms of myxedema (swelling of the skin and soft tissue), and dermal malnutrition, is a thyroid low in iodine.

This enlarged vascular system of the thyroid gland is directly related to an automatic attempt on the part of the organism to furnish a blood of probably lower iodine concentration to the thyroid at a greater rate, in order that this gland may meet the requirements for adequate colloid building.

Marine and Kimball say that 1 mg. of Iodine given weekly by mouth is ample to prevent goiter in dogs." - in "Thyroid hyperplasia and the relation of Iodine to the Hairless Pig Malady", Journal of Biological Chemistry, February 1918.

Goiter (lump or swelling at the front of the neck caused by a swollen thyroid).

> ***"The first instance of preventing goiter on a large scale, was accidental and in connection with the sheep raising industry of Michigan. Prior to the discovery of salt deposits around the Great Lakes, the future of the industry seemed hopeless, but with the development of the salt industry and its use by the sheep growers, goiter rapidly decreased. The salt contains appreciable quantities of both bromine and iodine.***
>
> ***The second instance of goiter prevention on a large scale was in brook trout.***
>
> ***Some years ago the development of goiter in artificially raised members of the salmon family became alarming and many plants were abandoned on account of the disease.***

> ***After considerable work, which led to the conclusion that the disease was simple goiter, we were able to completely prevent the disease in several hatcheries, by the use of very small amounts of tincture of iodine added to the water."*** *- D. Marine, in "Journal of Laboratory and Clinical Medicine", 1917.*

Marine has shown in the "Journal of Biological Chemistry", February 1918, that Constipation and the resulting Intestinal Putrefaction produce the Goiter changes noted in sows that give birth to hairless pigs, and that the disease may be cured by a proper diet and relief of Constipation.

Changes like those found in myxoedema were noted in the affected animals. Enlargement of the gland is attributed by this author and others to the presence of putrefaction products in the blood by which the gland is overstimulated and which cause it to seek to increase its detoxicating capacity by overgrowth." - Dr John Harvey Kellogg, MD, in "Autointoxication; or, Intestinal Toxemia", 1919.

Faulty Nutrition or Bad Food Choices

"1. Faulty Nutrition lies at the basis of nearly or quite All Cases of Arrested Uterine Metamorphosis and Absorption.

Whatever contributes to this Faulty Nutrition is of the first importance.

Lessened oxidation of the blood from diminished respiratory capacity in the last months of gestation, enfeebled circulation from the alleged fatty degeneration of the heart, incident to all pregnancies, perverted or exaggerated nervous manifestation attending ingravidation, all contribute to lessen the digestive and assimilative functions in all women.

The feebler the woman, ab initio, the more pronounced these contributions to Faulty Nutrition after delivery become, varying all the way from the minimum effect to the occasionally observed irretrievable impairment of health.

The more that the obstetrician reflects upon these factors of Faulty Nutrition in detail, and as a combination, the more he is astonished that more has not been written upon them, and the more he is surprised at the varying resistive capacities that women present at this time.

2. Another and but very little mentioned cause of Faulty Nutrition is diathesis (a constitutional predisposition toward a particular state or condition, especially one that is abnormal or diseased). Patients presenting strongly marked Rheumatic, Strumous or Gouty diatheses are extremely liable to become victims of a Faulty Nutrition, inducing arrest of fatty degeneration and absorption after delivery. Were time allowed, many cases illustrating the influence of diathesis in its deleterious effect upon women after labour could be cited. From the hundreds of recorded dispensary cases at my disposal, I could present multitudes of cases illustrative of the Rheumatic and Gouty diatheses in retarding involution. The confidence with which I can speak upon

this point is founded upon the results obtained from using so-called anti-rheumatic and anti-lithic remedies in treating and curing such patients.

3. Another factor of Faulty Nutrition is anaemia. This condition is so frequently produced by too abundant losses of blood seen in obstetric practice, that merely mentioning it suffices to call to the mind of every gynecologist numerous cases of involution arrested thereby. I know of no condition more common in gynecological practice than the enlarged uterus in women suffering from anaemia dating from confinement.

4. Another condition contributing to faulty nutrition, although it is in fact a mere symptom, included in some of the aforementioned systemic conditions, and of extremely frequent occurrence, is obstinate Constipation. The multiform evils arising from this trouble are as familiar to physicians. Yet there is no one thing more commonly overlooked and neglected by practitioners.

5. Another cause of Faulty Nutrition is laceration of the cervix uteri. This accident, resulting in cicatricial tissue, uterine displacement and obstructed circulation, speedily induces reflex, deleterious effects on the General Nervous Organism, which eventuate in a Faulty Nutrition of the system, and to this can we attribute the continuance of the enlargement of the uterus.

6. Another condition producing Faulty Nutrition is:

1. Faulty Hygiene, which includes, chiefly,
2. Bad Air,
3. Improper Food, and
4. Insufficient Protection against Atmospheric Changes.

7. Another condition conducing to Faulty Nutrition is the great activity of the Depressing Emotions:

1. Great Grief.
2. Fear.
3. Excessive Anxiety.
4. Humiliated Pride; and the like.

Produce such wrecking devastation upon the system as to result in Malnutrition.

8. Another cause of Faulty Nutrition, resulting in permanent uterine enlargement is that peculiar systemic condition characterized by a general depravity of all the powers of life, called Neurasthenia. (Mechanical Weakness of the Nerves, which consists of increased fatigue or bodily weakness and

exhaustion plus pantalgia, dizziness, headache and other symptoms relevant to autonomic nerve dysfunction). The more closely this term, as applied to the condition that it defines, is investigated, the more does it seem to be a pons asinorum (hard problem). Occasionally the obstetrician, bewildered for an explanation, is justified in taking refuge behind this term to explain the cause of sub-involution." - Dr James H. Etheridge, AM, MD, Professor of Therapeutics and Medical Jurisprudence, Rush Medical College, Chicago, in "On the Management of the Uterus after Parturition", Chicago Medical Journal Examiner, August 1880.

Toxic Load

"Bouchard has determined a unit of poison which he calls a toxic unit and defines as the amount of poison required to kill one kilogram of living matter. The urotoxic is the quantity of urinary alkaloids capable of killing a rabbit weighing a kilogram. The urotoxic coefficient in man is .465. In other words, for each kilogram of body weight enough poison is excreted in 24 hours to kill 465 gm. of living matter; or, in 2 days and 4 hours a man excretes enough poison to kill himself. These facts are of the utmost importance to the psychiatrist. Heredity may in time be as much divorced from insanity by the toxins as it has been separated from phthisis by the bacillus of Koch." *- Dr L. Vernon Briggs, MD, Physician to the Mental Department Boston Dispensary, in "The Boston Medical and Surgical Journal", 5 January 1905.*

"In conclusion, I think we are safe in assuming that a great many of the so-called chronic diseases of which the etiology and pathogenesis are still unknown will at some future date be classed under some special form of autointoxication." *- Dr Max Emmert, MD in "The Dietetics and Therapeutics of Autointoxication", Iowa Medical Journal, 15 July 1910.*

"Prof. Dr Van Noorden of Frankfurt, in his monograph on "Diseases of Metabolism and Nutrition", 1904, says: "Within recent years the idea has become firmly established in the minds of physicians that a variety of morbid phenomena are due to ***Autointoxication, are, in other words, attributable to certain poisonous metabolic products. This view, it is true, is not new, for it was familiar to the physicians of past generations, and was part of the teachings of the medical folk lore of long ago.*** *It was not, however, until Bouchard and his pupils published their investigations on the subject of Autointoxication that this theory attained the dignity of a scientific doctrine. At first we German physicians were by no means inclined to accept the theory of Autointoxication that was being so enthusiastically proclaimed.* ***Of late years, however, our attitude has become more friendly to the doctrine; this change of front is due to the fact that a number of toxic***

products of metabolism have actually been isolated, and their mode of origin in the organism and their pathologic effect determined to the satisfaction of the former critics of the doctrine. *We do not, of course, know all that* ***we should properly know about the poisonous metabolic products that we incriminate in so many morbid states; but in a large group of important symptom-complexes we are fortunately in possession of a number of facts that suffice to ground the Doctrine of Autointoxication on a Solid Chemical Basis."***

Prodromal State of Bacterial Invasion

Dr Kirk later says: ***"I have made the foregoing quotation from an eminent exponent of German scientific conservatism to emphasize the fact that: The Doctrine of Autointoxication As A Factor in Disease Causation, and as a Prodromal State of Bacterial Invasion, Rests Upon an Accepted Scientific Foundation." - Dr Greenbaum, MD, DDS in "The Practice of Dentistry", 1912.***

"When the primary Emunctories fail, your body will continue to try to eliminate toxics through secondary Emunctories, which are all the Mucous Membranes of your body (the moist, inner lining of some organs and body cavities, such as the nose, mouth, lungs, and stomach. Glands in the mucous membrane make mucus, a thick, slippery fluid). Many symptoms of illness that we think of as common — such as coughing, sneezing, vomiting, diarrhea, excessive urination, and liver-intestines mucous membrane secretions — are actually your body at work." *- in "Toxic Free How to Protect Your Health and Home from the Chemicals That Are Making You Sick", 2011.*

"Tampons and Menstruation-Associated Toxic Shock Syndrome (TSS). As Tampon absorbency increases, the risk for the development of TSS also increases." *- in* ***"Exotoxins of Staphylococcus Aureus",*** *Clinical Microbiology Reviews, January 2000.*

Paralysis Agitans (Parkinson's Disease)

"Case 49: A man, aged 56 was a typical example of Paralysis Agitans.

His mother died of cancer, aged 77, one brother died in a lunatic asylum, aged 62 (admitted when aged 26), one brother died of cancer of the colon, aged 58, one brother of phthisis, aged 41, and a sister of convulsions in infancy.

Early canities (premature greying of hair), and Arcus Senilis (gray or white arc or ring visible around the eyes) were family characteristics.

The patient was a medical man, and was of the opinion that his trouble began when he was about 20 years of age.

A typical example of familial Chronic Intestinal Intoxication.

The patient was dieted, subjected to Colonic Lavage, took iodine and thyroid substance internally, and the Faecal Vaccine (Enema), with the result that the general condition improved considerably. The interest of this case lies in the strong family history of **Chronic Intestinal Intoxication, and this points strongly to the Paralysis Agitans as being merely a manifestation of this fundamental condition."** - Dr James Eustace Radclyffe McDonagh, FRCS, Hunterian Professor at the Royal College of Surgeons, in "The Nature of Disease", Part III, Section I, 1931.

> ***"It is due to the Disorders of Metabolism, and Nutrition that degenerative changes cut short the activities of so many men, and women in middle life, that, in these latter days, Senility and Death itself come Prematurely to a very Large Proportion of Mankind."*** *- Professor Dr Carl von Noorden, MD, in "The Southern California Practitioner", June 1903.*

If Assimilations, and Eliminations were kept nearer normal in the human family, the days of life might be extended to whatever period as desired.

For the system, is built by the Assimilations of that which it takes within, and it is able to bring Resuscitation so long as the Eliminations do not Hinder.

Bad Food Choices A Major Factor in the Causation of Disease

"Dr Joseph Winters read the paper "The Food Factor in the Causation of Disease." He began with reference to the fact that the metabolism of animal protein unceasingly produces leucomaines that are toxic, as well as uric and other poisonous acids which the intestines, liver, kidneys, skin, lungs, constantly eliminate. When animal protein was excessive or elimination defective, systemic poisoning resulted, an autointoxication which caused disturbances ranging from slight indisposition to dangerous, even fatal, illness.

Food Toxins caused Disorders of the:

1. **Stomach**
2. **Lungs**
3. **Liver**
4. **Kidneys**
5. **Skin**
6. **Disturbed the Heart action**
7. **Irritated the Bronchial nerves.**

They caused:

1. **Headache**
2. **Neuralgia**
3. **Anemia**
4. **Sleeplessness**
5. **Drowsiness**
6. **Vertigo**
7. **Vomiting**
8. **Nerve Depression**
9. **Mental Aberration**
10. **Irritability**
11. **Nervousness**
12. **Convulsions**
13. **Ague**
14. **Edema**
15. **Arteriosclerosis, etc.**

Food Toxemia was the dominant cause of Mental and Physical Inefficiency.

The lymph glands and tonsils are toxin centres that might become inflamed or suppurate.

Autointoxication Is The Sole Cause of Many Diseases; including Gonorrhoea, Gout, Pyorrhea, and Decayed Teeth.

By taking out teeth and tonsils for Rheumatism and other conditions the primary cause was neglected and the Toxemia allowed to continue its deadly work.

Correct Diet with natural salts and vegetable protein, stopped intestinal fermentation and restored elimination.

The scientific basis for the maintenance of health is chemical physiology.

Doctor Winters then described a series of cases of diverse diseases, in which each patient was treated by correct diet and rhubarb and soda, and reported all greatly improved and most of them entirely cured.

In infancy, the disturbances which come from the sugar, the fat, and the protein were prototypes of the more complex disturbances of later life, when other types of protein were introduced.

It was quite as important to detect those disturbances from subnormal tolerance of particular food elements as it was to detect disturbances from an excess through overeating. The solution of these food disturbances involved a correct determination of the metabolic and chemical factors entering into them.

The experiments of Pavlov showed how decidedly psychology entered into the problem of digestion, and this factor should always be borne in mind.

Doctor Winters's claim that Arteriosclerosis might be due to food ptomaine poisoning appeared likely.

The Symptoms of Food Poisoning range from: Rheumatism to Asthma, Epilepsy, Skin Disease, Heart Disease, Etc. It was well recognized that there is Intestinal Food Poisoning, which Causes a Varied Number of Symptoms, and Symptom Complexes.

The etiological relation of protein to chronic interstitial nephritis there was a growing belief that toxic substances, developed during the digestion of proteins, played a conspicuous part in its development.

Dr R. Cole Newton said that most of his knowledge in regard to diet was the result of experience in his own person. In years he was getting to be an old man, but in body he was still comparatively young, for he had always taken great care of himself.

Posture also had a great deal to do with digestion; people with lax abdominal walls were at a great disadvantage, not only as regarded digestion but in other respects, especially their circulation.

It was necessary to have good elimination in order to have a good working machine.

Dr Elmer Lee, said that he had some experience in the matter of dieting and its effect on health, and for 25 years had tried to establish correct diets, though not always successfully.

25 years ago he began to study the question of diet, believing that wrong diet was the principal factor in causing disease.

His work in the preparation of his own diet resulted in the selection of an all vegetable diet as the one best adapted to human needs.

Vegetarian diet had not been satisfactory in general because its use had not been correctly understood and rightly employed.

A vegetable diet, properly selected and correctly prepared, was worthy of thoughtful respect.

One could eat anything according to the powers of digestion for a time without becoming diseased by keeping active enough to eliminate the waste from the system.

Rheumatism, Gout, Skin Affections, Asthma, Kidney Trouble, and other forms of Disease, even Paralysis, could be traced to the use of a wrong diet.

The matter of diet was not an individual one if the principles of correct diet were followed.

The knowledge of food values is of great use in the treatment of nephritis, as well as autointoxication, high blood pressure, or meat idiosyncrasies.

Doctor Weinstein referred to Disease or malfunctioning of the digestive organs brought about changes in the partitioning of the protein molecules that were apt to cause deleterious effects on the general system.

Insufficient detoxication on the part of the liver, defective digestion of food in the stomach or intestines, prolonged retention of food in the colon due to defective innervation of the muscular walls, or mechanical interference with normal peristalsis from any cause were a few of the factors in the etiology of disease due to food." - in "New York Medical Journal", 3 May 1919.

Misuse of Food: The Principal Factor in The Causation of Disease

“The science of living begins at the mouth. As a man eats and digests his food so he is. Owing to errors in human feeding, disease is latent in every man and at all times. The few that do not abuse health have the rewards which follow upon it. Life is maimed, and but half what it might be on account of sickness and premature death. Sound Health Means Living by Knowledge, and not by chance. Artificial Appetite and Gluttony please for the moment, to be followed later by compound Interest in Pain and Bodily Distress.

The mouth is the open door to health and strength, likewise, to self-injury and early destruction. Wrong habits early acquired often abuse the hospitality of the stomach. The first warnings of injury, done to the gentle, patient stomach, are mild, followed later by absolute protest against further abuse; finally, after much warning, many protests and great injury, disease is established.

Then comes suffering, disability and sorrow. Digestion is properly performed by the stomach and its juices. In reality, so delicate are the organs of digestion, that even slight errors of the diet may bring on disease and fatality.

If the mouth were taught to reject what is unfavourable in the digestion of food, and if food was in the proper proportions, and quality, no one could know by any unpleasant sensation of the existence of a stomach. A life under right habits of living is worthy of every man’s best efforts. Living according to the intent of nature should carry human age above 100 years, and the last years ought to be the pleasantest. Honour and respect is due the old, especially if that old age is the reward for prudence and righteous living. Over-work of the stomach and foods that are not wholesome, constitute the first weak link in the chain of health. Such food material as is not in a state of adaptation for easy solution when it reaches the stomach may, and usually does, lay the beginning for:

1. **Consumption (Pulmonary Tuberculosis)**
2. **Cancer**
3. **Tumors**
4. **Abscess**
5. **Rheumatism**
6. **Neuralgia**
7. **Neuritis**
8. **Paresis**
9. **Paralysis**
10. **Bright’s disease**
11. **Apoplexy**
12. **Nervousness**

Every care is to be taken to preserve a sound stomach, and this is most

successfully accomplished by paving great attention to food, while it is yet under the control of the hands, the senses, and judgment. The importance of thoughtfulness in food selection is a matter that can not be overstated. It assures certainty of digestion, and saves the stomach from exhaustion tire by strenuous activity, and disease. A sound stomach is the surest means of avoiding sickness in other parts of the human body. If the stomach is over-served with heavy, fatty food, and, especially, if such food has not been partly digested by correct cooking and ripening and softening, some part of the contents pass into the system in a state of incomplete digestion. Indigestion is widespread, and by reason of such defects at the very source of strength, the body is weakened and accumulates sediment faster than the system can remove it. The disease called Grippe or Influenza, for example; originates in consequence of some defect of the stomach. It is impossible to acquire foul blood, and consequent bodily disorders where right feeding is the daily rule. Such diseases are not to be treated at the point where they first show themselves. The affection in the nose and throat in such cases are convenient spots selected by the disordered system to give a warning of the revolt going on within the body. The disease is always inside the organism before it appears upon some part situated nearer the surface. Mucus or yellow pus from the throat, nose or lungs is the effete product from a diseased blood. The system is trying to remove the waste by forcing it to the point of least resistance such as the nose or throat that it may be thrown off.

A scientific treatment of disease begins by kindly prohibiting the entrance into the stomach of all objectionable food substances.

The Alimentary Canal Is The Root Of life. The weight of the body depends upon the amount of food that it can prepare and absorb, while strength and bodily comfort, depend upon so much as is perfectly converted and assimilated. Perfect digestion depends upon health of the vital organs, and in turn perfect health of the vital organs depends upon a perfect digestion. It is seen by this interdependence between vital parts and digestion, that continuous health depends upon an even balance of forces acting in harmony. If the food is proper and digestion perfect, nature has a fair chance to show itself in the beauty of health. Mental and physical wrecks and human beings with added sorrows, are directly traceable to mistakes which start at the mouth. It seems strange that man's food, his best ally, can at the same time be his greatest danger. Food may be good and wholesome, but it is not to be admitted into the stomach till it has been inspected and passed, as safe, and suitable. Children have many narrow escapes from death, but reserve vitality carries some of them to mature years, even though affected with disorders and disease all along the way. In spite of daily and oft repeated errors, children manage to live and grow, but many are stunted and deformed by the time the growth is finished. False table-habits begun in the early years of life are next to impossible to correct." - Dr Elmer Lee, AM, MD, Late Chairman, Physiology and Dietetics, American Medical Association, in "The Misuse of Food the Principal Factor in the Causation of Disease", The Medical Times", April 1911.

Common Health Conditions Associated with Ageing

> ***"Common conditions in older age include hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, chronic obstructive pulmonary disease, diabetes, depression and dementia. As people age, they are more likely to experience several conditions at the same time.*** *Older age is also characterized by the emergence of several complex health states.* ***They are often the consequence of multiple underlying factors and include frailty, urinary incontinence, falls, delirium and pressure ulcers."*** *- in "Ageing and Health", World Health Organization, 1 October 2024.*

Top 10 Chronic Conditions in Older Adults

"According to National Council on Aging research, **94.9% of adults age 60 and older have at least one condition, while 78.7% have 2 or more.**

Here are 10 common chronic conditions adults 65+ on Medicare were treated for in 2018:

"Centers for Medicare & Medicaid Services. Chronic Conditions. Chronic Conditions Prevalence State/County Table: Fee-for-Service Beneficiaries 65 Years and Over, 2018".

1. Nearly 60% of older adults were treated for Hypertension (high blood pressure).
2. More than 50% of older adults were treated for **"High Cholesterol".**
[Every Emunctologist; should know that this is Science Farce, Not Science Fiction, its pure profiteering from a non Existent Condition by the Medical Trade. See: Chapter 41 **"High Cholesterol: Another Medical Trade Farce"**; also "Its Not Cholesterol It Is Inflammation", Medicine The Lies, The Greed & The Death, 2021].
3. About 40% of adults 65 and older are living with **Obesity, a chronic disease linked to more than 200 chronic conditions.**
4. About 35% of older adults were treated for **Arthritis.**
5. Nearly 29% of older adults were treated for Ischemic Heart Disease (or coronary heart disease).
6. 27% of older adults were treated for **Diabetes.**
7. Nearly 25% of older adults were treated for C**hronic Kidney Disease** or a slow loss in Kidney function over time.
8. About 15% of older adults were treated for **Heart Failure.**
9. 16% of older adults sought treatment for **Depression.**
10. Nearly 12% of older adults were treated for **Alzheimer's disease or another form of Dementia."** - in "The Top 10 Most Common Chronic Conditions in Older Adults", 30 May 2024.

Chronic Conditions

“Prevalence and Medicare utilization and spending are presented for the **21 Chronic Conditions** listed below for the years 2007-2018.

Alcohol Abuse
Alzheimer’s Disease and Related Dementia
Arthritis (Osteoarthritis and Rheumatoid)
Asthma
Atrial Fibrillation
Autism Spectrum Disorders
Cancer (Breast, Colorectal, Lung, and Prostate)
Chronic Kidney Disease
Chronic Obstructive Pulmonary Disease
Depression
Diabetes
Drug Abuse/ Substance Abuse
Heart Failure
Hepatitis (Chronic Viral B & C)
HIV/AIDS
Hyperlipidemia (High cholesterol)
Hypertension (High blood pressure)
Ischemic Heart Disease
Osteoporosis
Schizophrenia and Other Psychotic Disorders
Stroke

Chronic Conditions identified are based upon ICD-10 codes for the full year.” - in “U.S. Centers for Medicare & Medicaid Services”, 10 October 2023.

> ***“In Group III.***
> ***They realise their condition can be completely alleviated, so they go back to their old ways of eating and drinking. In time, the lesions will return, usually worse than before. As with Group II, they won’t panic. Having been successful once, they feel they can take over, and be in control whenever they decide to get around to it.***
> ***The sad thing about this group is they never do.***
> ***They seem to forget that there is a law of irreversibility.***
> ***One day, the organs of the Emunctory System will, because of Over-Taxation, break down to the point of no return.***
> ***This group should hear as often as I do the pleas of those who live with them, and suffer the silent burden of “cleanup” wherever the Psoriatic goes.”*** *- Dr John O. A. Pagano, DC, in “Healing Psoriasis: The Natural Alternative”, 1991.*

Eyes Disease & Oral Hygiene

"The importance of Sepsis in the Causation of Eye Diseases is obvious, since 215 are attributed to it alone, and only 168 to all the other recognized causes.

Of the 215 toxic cases 180, if the 3 tonsil cases are included, are due to Alimentary Toxemia, and 139 are credited to Pyorrhoea alone, hence the importance of Oral Hygiene.

Cases due to gonococcus have been included in this table, because when these patients come to the ophthalmic surgeon they are suffering **from iritis and cyclitis, due generally to an infection of the prostate, the remains of an uncured urethritis, which must be dealt with by Massage and vaccines (Enemas) if a permanent cure is to be effected.**

The remaining causes are very important, although they form such a small minority, since they indicate the sources that must be investigated if an obscure case is to be elucidated.

As an example I will instance that of an unmarried lady who consulted me in 1890 for an error of refraction, and came again in 1905-06, first with patches of choroiditis, and later with an irido-cychtis; she was anaemic, and the dentist said she had spongy gums due to tartar, which he removed; still the eye did not recover.

But when **in October 1900, Sir John Bland-Sutton removed a mucous polypus from the neck of the uterus, and thereby relieved dysmenorrhoea of some years standing, the eye quickly got well and has not relapsed.**

Tables I.A and II.A

They record the number of different parts affected; in many patients the disease attacked more than one part, in the septic group, Table I.A, it will be noticed that the uveal tract (the middle layer of the eyeball), is the part chiefly involved, hence the greater number of Secondary Cataracts; whereas in Table II.A the sclerotic and cornea, the retina and optic nerve are more frequently affected.

Though **it would appear to be obvious, after seeing these tables, that sepsis from pyorrhoea is an important agent in causing inflammation of the eye,** nevertheless this view is not yet universally accepted.

The usual objection made is that one sees very bad cases of pyorrhoea in people who say that they are enjoying the best of health and who do not complain.

These objectors seem to forget that Nature begins to raise a protecting barrier the very moment that the tissues are irritated by bacterial toxins or are invaded by the bacteria themselves.

If the invasion is slow enough, as is the case in Pyorrhoea, the barrier is efficient and the individual does not appear to suffer; whereas when the micro-organisms are introduced direct into the circulation there is no time for an efficient barrier to be raised.

As long as the patient is in fair health the barrier is capable of doing its work; but this barrier may give way directly the general resistance of the tissues is lowered under the strain produced by some other illness or by traumatism, either surgical or accidental. **Then the organisms, or an excess of their toxins, will be able to pass through the defending barrier, and some tissue in the body may become the seat of disease. The enormous number of cases of pyorrhoea (infection of the gums) that one sees, and the comparatively small number of diseases resulting therefrom, shows how very efficient is Nature's barrier.**

These people with bad pyorrhoea say, and presumably believe, that they are in the best of health. They are of course living, without knowing it, over a hidden drain which is constantly emitting poison, in such an insidious manner that they are unaware they could possibly feel in better health.

When the drain is removed they are astonished at their increased vigour and feeling of rejuvenation. Although marked and long-standing cases of pyorrhoea are easily recognized and would be condemned as inimical to health by most surgeons, **I would like to draw the attention of my colleagues to the importance of recognizing even mild cases of the disease, as they also can cause central choroiditis (inflammation of the choroid, a layer of blood vessels in the eye).**

Quite recently an ophthalmic surgeon who recognizes that pyorrhoea (periodontitis) does cause central choroiditis, sent me such a case for my opinion as to the cause." - in "Alimentary Toxaemia; Its Sources, Consequences and Treatment", RSM, 1913.

Chronic Cerebro-Spinal Toxaemia: Substitute Term for Rheumatoid Arthritis

"I have read with interest the articles and correspondence concerning Arthritis which have appeared in the "British Medical Journal" recently.

I agree with those who say: We have too many labels in connexion with Rheumatic Ailments. Many years ago Dr R. L. Jones-Llewellyn suggested Chronic Cerebro-Spinal Toxaemia, as a substitute for the term Rheumatoid Arthritis, and it is a matter of regret to me that it never came into use.

When dealing with a case of Arthritis, I try to forget that the patient has any joints; I think of the Central Nervous System, and the Endocrine System.

To me these are of far greater importance than the joints.

I have difficulty in accepting the view that staphylococci, streptococci, the B. coli, etc., are ever the chief cause.

I think that some infective malady, even one so apparently slight as measles or chicken-pox, may be a main factor in the production of arthritis.

I hold that germs may linger in the system for an indefinite period.

None of the writers have called attention to tuberculosis as a factor, in spite of the fact that French authorities have given great prominence to this.

I find, personally, that non- specific treatment, skilfully handled, acts admirably in dealing with rheumatic ailments.

Of course, if a pneumococcus or a B. influenzae (Pfeiffer) can be found, then an autogenous vaccine should be utilized. For nearly 30 years I have pinned my faith to continuous counter-irritation, and I have yet to find a method of treatment that I can handle more efficaciously." - Dr Wm. J. Midelton, MD, in "British Medical Journal", 27 July 1929.

Hardening of the Arteries

"Reduced blood supply following "Hardening of the Arteries", Arteriosclerosis, progresses slowly, is chronic and more common and devastating as the years go by. Blood vessels have 3 layers: In Arteriosclerosis proper, the vessel hardens as a result of fibrous and mineral deposits in the middle layer of the vessel wall. The more critical Associated condition is Atherosclerosis. Fatty substances collect on the inside vessel wall, forming Atheromas (pulpy, fat-laden deposits), narrowing the passage and impeding the blood flow.

Diminished Supply of Food and Oxygen

The Heart, Brain, Kidneys, and Other Organs Are Impaired by the Diminished Supply of Food and Oxygen that reach it because of the Impaired Blood Circulation. Heart attacks and Strokes result from the impairment and clots that form. Arteriosclerosis and Atheromata are not distributed uniformly throughout the circulatory system of the body. Consequently there may be discrete, local lesions, causing damage in specific organs in the absence of ill effects elsewhere." - in "Public Interest Report No. 17", "Man does not die, he kills himself", Int. J. Aging Hum. Dev., 1975.

> ***"Food tables are targets at which "Food Scientists" talk over the heads of unsuspecting, plain people, mostly idle talk, but the basis of "prating" by Food Lecturers, and Diet Books."*** *- Dr. Elmer Lee, MD, in "Health Culture", 1916.*

> ***"There is a simple dietetic rule, the observance of which goes far to insure health: Never eat, when you are not hungry. Miss a meal, or two, taking, instead of food a glass of water, sipped slowly. To it you may add a little lemon or other fruit juice, without sweetening. Hunger and appetite are as different as fasting and starvation. A sinking and gnawing at the pit of the stomach is not hunger. That is Inflammation of the lining of the stomach. The cure is Oxygen, not food, that ferments and rots. Food will temporarily relieve your symptoms, at such times, but you must pay for it later, in chronic dyspepsia, and other ailments. You are hungry, when your mouth waters for a piece of dry, stale bread; when the whole system cries for nourishment. Many "civilised" people never know what real hunger is. Eat right, and you may begin life anew."*** *- in "Brain and Brawn; A Sound Mind in a Sound Body", September 1916.*

Disorders of Deficiency of Thiamin, Niacin and Pyridoxin

"Previously undescribed Disorders of Nutrition of Thiamin, Niacin and Pyridoxin were observed among the poor people of North China during periods of prolonged deprivation.

Disorders are Exacerbated by Physical Exertion

These Disorders were often elicited or Exacerbated by Physical Exertion.

Thiamin Deficiency

Thiamin Deficiency:

1. Great Toe Pain.
2. Heel Pain.
3. Temporomandibular Joint Click.
4. Painful Click of the Knee.

Niacin Deficiency

Syndromes of Niacin Deficiency included:

1. Pellagral Scrotal Dermatitis,
2. Hypersecretion of Ear Wax.
3. Night Terrors.

Pyridoxin Deficiency

Pyridoxin Deficiency:

1. Episodic Nocturnal Motor Hyperfunction

Nutritional Debt and Oxygen Debt Following Severe Physical Labour

Several cases with cardiovascular diseases were observed in which Nutritional Debt appeared to Occur Simultaneously with Oxygen Debt following severe physical labour. Intramuscular Thiamin Hydrochloric Acid ameliorated symptoms of impending stroke. Persons with the same symptoms who did not receive Thiamin progressed to fatal stroke." - Dr Bok Y. Lee, MD, FACS, in "Nutritional disorders among workers in North China during national turmoil", Annals of Nutrition and Metabolism, 2001.

Chapter 31

The Colon As The Seat of Disease

"Man does not die, he kills himself." *- Seneca*

"Medicine is largely a circle or train of reasoning, and he who cannot reason in medicine is not fit to practice this great science.

When a water pipe bursts we know the futility of trying to stop the waste of water by tying something over the hole.

Our better reason leads us to turn off the valve that controls the inlet of the water, and then mend the pipe. It is just so in the treatment of disease.

What we see first in the way of objective symptoms are but the leaks, as it were, of what is a result of some trouble in the "pipes" inside.

And the "pipe" that causes the most disease is the colon.

I have been so impressed with the prevalence of colonic disease as a first cause in so many apparent symptoms of other diseases and the utter disregard or ignorance of doctors in making this observation, and I have considered it so important that I take this opportunity to bring it home to the common sense of every reader of this truth.

To try to stop the "water" gushing from the "leak hole" of certain:

1. **Headaches.**
2. **Liver complaints.**
3. **Pseudo Pneumonias.**
4. **Coughs with Bloody Adenoids.**
5. **Hives.**
6. **Imitation Bronchitis.**
7. **Epileptic Fits.**
8. **Redness & Puffiness of the Face.**
9. **Impetigo and other Skin Eruptions.**
10. **Bloating of the bowels even after they have moved.**
11. **Difficult Breathing not Asthmatic.**
12. **Heart Disturbances.**
13. **Loss of Appetite.**
14. **Soreness all over.**
15. **Marasmus.**
16. **Bad Taste in the Mouth.**
17. **Broad Whitish Coated Tongue.**
18. **Fever from subnormal to 40 C.**
19. **Nervous Breakdown.**

By some direct method is just the same as trying to tie a band about a leak in a pipe under high city pressure.

They will all still spurt in spite of the treatment of the effect.

What I want to insist upon is that as practitioners we should always keep in mind that the colon is the seat of disease “pressure” that has in all likelihood caused this sort of “leaks” and is the place to apply the remedy.

It is the seat of Autotoxemia for the reason that the structure of the colon is such that faecal matter is retained in the many sacculi often many months, while the main stream of the faecal mass passes by without moving the retained masses.

Because the patient says that his bowels moved that morning is no sign that they are empty of long retained fecal masses.

This, to my mind, is quite an important deduction, and too, one which has been greatly overlooked during this wide spread “Influenza Epidemic.”

I venture to say that many deaths said to have been caused by the “Flu” or Pneumonia resulting from the “Flu” were caused by Autotoxemia from bowel impaction.

Every case I have had has had various degrees of soreness over the tract of the colon, the caecum and splenic flexure being most frequent, while the duodenal flexure was less frequent; but often all 3 places were very sore, combined with the intervening tracts.

And I also conclude that soreness over any of these parts of the colon is always an indication of the presence of retained faecal matter beneath the soreness.

Now the strange and misleading part of this deduction is that the Toxemia caused by these slowly decomposing masses readily absorbed by the large mucous surface which they touch, sets up in the system many symptoms that seem so far removed from this cause source that many of us are not only led to give an erroneous opinion of what the disease is, but also greatly err in the line of treatment we inaugurate.

A very recent case will illustrate: I was called to see a young lady (C.T.), 23 years old, who had come down with what they said was the “Flu” the Thursday before, just 4 days before I was called.

The Allopath (Medical Trade Practitioner) attending her said she had Pneumonia and would not live.

Another Allopath (Medical Trade Practitioner) was called in for consultation before they would decide to let me proceed with the case.

The second Medical Trade Doctor agreed with one who had the case.

I told them that there was no real Pneumonia symptoms; that the cough and shortness of breath all resulted from the Toxemia from an impacted colon; **that the case was curable if treated for a colitis by High Irrigation (Colonic Irrigation).**

This They Denied. The friends decided that inasmuch as 3 Medical Trade Doctors (another saw the case during the day) agreed that it was Pneumonia and I disagreed in total that the first doctor could retain the case.

The Following Evening The Woman Died.

I found that the whole tract of the colon from the caecum to the splenic flexure was extremely sore and hard.

By rubbing upward gently over the caecum I found that I could relieve the soreness considerably; also that a hypodermic of subculoid lobelia 30 gtt. with the same of echinacea was quite a relief to the tension of the whole system.

But before I could proceed to the High Irrigation (Colonic Irrigation), they decided that the consultation should be held.

And that was as far as I could go with the treatment.

The stethoscope showed no sign of a rale nor involvement of any area of the lung.

The air reached the lowest tips of the lungs.

Yet it was "Lobular Pneumonia", so they said.

They had her chest and abdomen greased with lard and turpentine, and **she was taking Medicine (Medical Trade Pharmaceutical Drugs), which the friends admitted was doing no good.**

The question that impressed me with this case in mind is how many other practitioners are making this fatal diagnosis?

How many are mistaking pseudo-symptoms for the real.

How many are thinking of the Colon the moment they enter the sickroom and see:

1. **Coated Tongues.**
2. **High Fevers.**
3. **Convulsions.**
4. **Hacking Coughs with Chest Aches and sometimes Pains.**
5. **Aching all Over.**
6. **Loss of Appetite.**
7. **Weakness.**
8. **In fact a Long Train of Symptoms one meets among those who Eat Inordinately.**

My rule is to make a small thrust with my finger ends over the 3 cardinal points of the colon to see if there is soreness or tenderness when diagnosing cases that show any suggestive symptoms.

Many cases do not know that they have this soreness until I find it.

Another case will show what symptoms will do to reveal what the first cause is.

A man 32, with fever 40 C., broad White Coated Tongue, Throbbing Headache, Cough and Soreness about Trachea, declared he was about to have Pneumonia.

I felt over the colon but did not find any sore spot.

He had no appetite, was bloaty; Bowels Constipated, and he bore all the symptoms of Autotoxemia.

I told him that his bowels were impacted and poisoning the system.

He could not believe it. He insisted that his lungs were sore at the top.

I told him that if the bowel was irrigated that his cough and lung soreness would disappear.

He would not submit to the irrigation as it would "hurt."

I left remedies for the headache - veratrum with gelsemium - and for the soreness and intestinal catarrh - macrotys, leptandra, baptisia, rheum; for the cough sanguinaria.

The next day the wife had him resigned to my irrigating treatment.

The Bowel Irrigation brought a few hard masses and exfoliations of the mucous membrane from an area which he now admitted was sore.

His temperature was still 39.5 C. and his headache still severe.

But after the first Colonic Irrigation brought the Fever Down a degree at once.

Two more Colonic Irrigations the next 2 days put him back to a beginning appetite, and he could sit up.

In a few days he could eat fruit which for years he could not eat, and he was soon back to work with an appetite for anything.

Many patients with colonic obstruction or retained faecal masses will complain that they have such a soreness over the spleen.

Others will declare that they have a hurting over the stomach.

Others will have a very sore duodenal region involving the liver which may even be enlarged.

These are misleading to one with poor powers of observation.

All these are but results from gas pressure or Toxemia from the decaying faecal masses lying somewhere, usually under a sore place, along the tract of the colon.

I firmly believe that stomach troubles are rarely primary, barring poisons and whiskey taken into it.

A catarrh of the stomach in the vast majority of cases is but the reaction of decaying faecal matter in the colon.

What I wish to emphasize is that in internal medicine "things are not what they seem", and that **the Colon by its very structure and the heterogeneity of foods forced upon it, many of which are Constipating to a high degree, Is The Fundamental Sources of Most of Internal diseases and symptoms.**

And let me say too that no system that is free from Colonic Toxemia is subject to the so-called "contagious" diseases." - Dr Thomas L. Brunk, MD, Alton, Illinois, in "Colon The Seat of Disease", Ellingwood's Therapeutist, 1919.

Colon Infection

"The Colon Bacillus is the Dominant Germ found in the colons of Constipated persons and those suffering from Autointoxication.

Metchnikoff charges the colon germ with being the cause of old age and many degenerations. Recent observations, have shown that deep-seated abscesses of the kidney and various pelvic organs, as well as inflammations of the bladder and other parts of the genito-urinary organs in both sexes, are due to infection by the colon bacillus. The organism, finds its way through the mucous membrane of the intestine into the blood vessels, and in this way the infection is developed in various parts of the body. The entrance of the germs is favoured by Colitis, and other diseased conditions arising from Constipation." - Dr John Kellogg, MD in "Good Health", March 1919.

The Cecum Cesspool

"One of the "Danger Spots" in the body is the cecum, the broad pouch which forms the head of the colon. Attached to the lower end of the cecal pouch is **the Appendix, one of the most active storm centers in the body.**

No portion of the internal human anatomy has so often been removed as a cause of offence and danger to life as the Vermiform Appendix.

The Function of the Appendix

The Appendix has, indeed, come to be regarded by many surgeons as possessed of such vicious tendencies that its removal on sight is justifiable when opportunity is afforded by some other necessary operation, even when apparently in a perfectly healthy condition, since it is almost certain to go wrong some time. But the bad reputation of the Appendix is not altogether justified by facts. Its bad conduct is chiefly due to its unfortunate associations rather than to any intrinsically bad tendencies of its own.

The Appendix is so placed, that its mouth is attached to the bottom of a cesspool.

Nature has provided it with an efficient protection in the form of a closely fitting trap door or valve which opens outward, and closes tightly against entrance to the interior of the Appendix.

This permits the normal Appendix to carry on its beneficent and useful work of manufacturing the Limpid Mucus which it pours out in great abundance to lubricate and protect the walls of the cecum, and to facilitate the passage along the colon of its contents received from the small intestine.

All goes well so long as conditions are normal.

But when, through neglect, constipation develops, the situation rapidly changes. The contents of the cecum, being long retained, undergo putrefactive changes.

Poisonous ptomaines are formed, some of which approach the venomous serpents in their virulence. The mucous lining of the cecum becomes irritated and inflamed, the seat of colitis. Gases form which disturb the colon.

The cecum, which is normally only a shallow pouch holding a few ounces (250 to 500 grams), becomes so dilated that it may hold 1 kilo or more of putrefying feces. The overstretching of the bowel enlarges the opening into the appendix to such a degree that the valve is no longer able to close it tightly.

Gases find entrance to the narrow tube and distend it.

Putrid faecal matters also enter and irritate and infect the mucous membrane.

Inflammation results, and this is Acute Appendicitis.

So long as the mouth of the appendix remains widely open, no serious trouble arises. The patient may have many slight attacks of pain and discomfort in the right lower quadrant of his abdomen, but he recovers quickly and is not very greatly inconvenienced. But after a time, longer or shorter, the opening into the Appendix becomes closed or obstructed, and now grave mischief and danger begin. The Appendix can no longer discharge its contents into the cecum.

Putrefaction proceeds, distending the Appendix, a process which gives rise to great pain. **The inflammation extends outside of the Appendix, through which or through rupture of the Appendix, an abscess is developed in the region of the Appendix. The infection and inflammation may extend to the adjacent portions of the abdomen, causing general or circumscribed Peritonitis.**

Prompt operation and drainage may save the patient's life.

[Editorial Note: The Emunctologist should know how to treat the Appendix without surgery; Enemas and Orange Juice Diet should be implemented, only in advanced stages should the Appendix be removed by surgery, in case of surgery, the surgeon should be an Osteopathic Surgeon, never a Medical Trade Surgeon].

If neglected, these cases are almost certain to end fatally, although occasionally recovery occurs by discharge of the abscess externally or into the intestine. Even operation is very hazardous when postponed until peritonitis has developed or the Appendix ruptured, so that the peritoneal cavity has been infected. This is the real genesis of appendicitis. But there are other troubles in this region, one of which is so-called chronic Appendicitis. These are cases in which the conditions above described exist, but are not so bad as to develop the symptoms immediately threatening to life. **In some cases there are occasional attacks of pain in the right side near the groin, which soon disappear with rest and a thorough evacuation of the bowels, only to recur on the renewed provocation of a meal of hamburger, sausage or some other germ-laden comestible. Still another condition, perhaps most common of all, is a chronic soreness and tenderness with more or less insistent pain in the lower right side, with frequent gurgling sounds in this region and often a sense of weight or tension.**

This condition is not a disease of the Appendix, but of the whole cecal region.

Unfortunately, the poor appendix usually gets all the blame and too often such cases are operated upon by enthusiastic surgeons who are ready to remove any appendix whose owner is willing to dispense with it.

Hundreds of such persons are operated upon annually with the expectation that their symptoms will promptly disappear, but they do not; all the old distresses remain, notwithstanding the elimination of the Appendix, and in many cases the Chronic Constipation is worse because of the increase of adhesions which bind and hamper the cecum so that it cannot empty itself of its contents. A badly Coated Tongue, Pigmented Skin, Foul Stools, and often pronounced Neurasthenic Symptoms, afford evidence of the profound Autointoxication present.

The Only Efficient Remedy Is A Change of the Intestinal Flora, which may be brought about by a Fruit Regimen, the free use of bran and paraffin to quicken peristalsis, and the systematic use of liberal quantities of a rich culture of lactic acid forming ferments, especially the bacillus Bulgaricus, the B. acidophilus, and the B. bifidus. These cultures should be used both by mouth, and by rectum, so as to displace the mischievous bacteria as rapidly as possible.

After a few days of the fruit regimen to change the flora, as soon as the stools have lost their putresence, a laxative, antitoxic diet should be adopted and permanently followed. In addition to the above measures, when the tongue does not quickly clear off, care should be taken to empty the colon daily and completely by means of the Enema.

This measure must be used continuously, if need be for a long time, to insure against a recurrence of the Intestinal Toxemia." - Dr John Kellogg, MD in "Good Health", June 1919.

> *"One of the earliest depictions of the Mesentery associated with the Small Bowel and Colon was generated by Leonardo Da Vinci. The Da Vinci mesentery was continuous and appeared to converge centrally.* ***The Mesentery associated with the Small Intestine and Colon is now regarded as contiguous. It emerges from the superior mesenteric root region and fans out to span the intestine from duodenum to rectum; however, the continuity can be seen only when the mesentery is exposed in a certain way. Dividing the peritoneum provides access to a plane formed by the mesentery and underlying fascia. When peeled away from the fascia, the mesentery emerges as a discrete entity. Repeating this process from duodenum to rectum reveals the entirety of the mesentery. With contiguity now revealed, the embryological development of the mesentery, peritoneal reflection, and fascia need to be reappraised."*** *- "The mesentery: structure, function, and role in disease", The Lancet Gastroenterology & Hepatology, November 2016.*

The Relation of Surgery to Osteopathy

"In discussing the subject "The Relation of Surgery to Osteopathy", I shall consider surgery as an adjunct to, and an integral part of, that great philosophy Osteopathy. I shall discuss the relation of Osteopathy to surgery and here I shall consider the great value of Osteopathy in surgical cases.

Stedman's dictionary tells us that:

> ***"Osteopathy is a System of Therapeutics based upon the theory that many diseases are due to pressure upon the vessels or nerves by some displaced vertebra or other part of the skeleton, or to a condition of imbalance of the muscles moving any joint; the treatment is directed to the mechanical correction, by means of manipulation, of the assumed osseous displacement or muscular unbalance, with the consequent repression of the abnormal reflexes and a restoration to normal of the circulation and the nerve impulses."***

This is the fairest definition of Osteopathy that I have ever seen in a medical dictionary, and is true as far as it goes. But, Osteopathy is a philosophy, and goes far beyond "the mechanical correction of osseous lesions or muscular imbalance."

It is a System of Adjustment, and includes all that is good and of value in Therapeutics. In fact it of necessity includes all that is good and of value in Therapeutics. A patient may come to us suffering from indigestion due to gross Errors of Diet. Upon examination, especially if the case be of long standing, we will doubtless find an osseous lesion or muscular imbalance even though such lesion is the result and not the cause of the indigestion.

In this case, it is just as Osteopathic to adjust the Diet as to Adjust the Lesion.

Certainly our Treatment is not complete and we will not effect a cure if we do not adjust the Diet. We often find an Appendicitis caused by an adhesion of the meso appendix which has caused a sharp angulation of the appendix thus preventing a proper drainage of the organ, or perhaps, it may be a Jackson's membrane which has so impinged upon the Appendix as to interfere with its normal circulation. Only a few days ago I found an Appendix with a double angulation and the circulation so nearly cut off that the tip was very much congested and filled with mucus. In a short lime this mucus would have changed to pus and we would have had a suppurative Appendicitis or Appendicular abscess. In this case no amount of manipulative treatment would have sufficed, in fact, if wrongly applied it would have been dangerous. It was just as Osteopathic to remove that Appendix, as it would he to correct a lesion of the right 12th rib in Constipation. In each case we have found the cause of the trouble and adjusted it. A few months ago I listened to a very interesting and instructive talk on Osteopathic gynaecology. Some one asked the speaker, a woman, what she would do in the case of cystoccle. Her answer interested me very much.

> Said: ***"I would treat the case Osteopathically and if unable to cure it that way I would turn it over to the surgeon."***

I assume that she made a distinction between the 2 methods. Now a cystocele, or prolapsed bladder, as you know, is due to a badly lacerated perineum accompanied by great relaxation of the pelvic structures. Bearing these facts in mind I am convinced that the only practical Osteopathy in these cases is surgery. In closing, I wish to emphasize one point: surgery is a necessary part of any method of Therapeutics, and, while there scents to he a feeling that the general practician does not need a knowledge of surgery. I wish to make a pica for a better knowledge of surgical diagnosis. We do not expect all to become surgeons, but we should all know when we have a border line case, and when a case should he turned over to the surgeon." - Dr L. Curtis Turner, MD, DO, in "Journal A. O. A.", February 1919.

The Surgeon had Failed to Cure

"I found, however, that it had lasted long enough to give me knowledge of a kind that is not conveyed in ordinary surgical teaching, and that: When Guided by Anatomy, Is of the Highest Practical Value, as well in Preventive as in Curative Treatment. A joint previously stiff, painful, and helpless, was almost instantly restored to freedom of action by his handling, and the change was often attended by an audible sound, which he regarded as an evidence of the return of a bone to its place. To proceed in due course to the performance of Manipulations by which, in many instances, the patient is speedily cured.

My belief that the practice of the Bone-Setter has not only lain in what the Lancet calls a "Neglected corner of the domain of surgery".

The following letter, which appeared in the "Echo" Newspaper in March 1870:

> *"A short time ago, a painter, working for me, fell from one floor to another, was much hurt, and sent to Bartholomew's Hospital, London.* ***After remaining there about 3 weeks, he was sent out as cured, although he could not walk without crutches. After about 2 weeks, seeing that he got no better, I sent him to a Bone-Setter, who found that his left hip and knee were both dislocated, which since then he has put into their right places, and the man now comes to his work as he used to do before the accident. I have several other cases showing the incapacity of the Surgical Profession. They, the students, are taught to know how to amputate legs, and arms, and make cripples, but not one of them knows how to deal with dislocations, and thus save the necessity of amputation.***
>
> ***I have myself been the cause of saving, through the Bone-Setter, 2 legs from being cut off."*** *- Thomas Lawes*

Every country in Europe, has its bone-setter, independent of the surgeon.

In Johnson's Dictionary, under the article “Bone-Setting”, we read that a Sir John Denham exclaimed: “Give me a good bone-setter!”

In Spain the bone- setter goes under the significant denomination of Algebrista.” - in “On Bone-Setting, and its Relation to the Treatment of Joints Crippled by Injury, Rheumatism, Inflammation”, 1871.

The Treatment for the Chronic Invalid

“These experiments clearly show the importance of maintaining sufficient variety in the bill of fare (importance of food choices) and also the importance of keeping the colon free from putrefaction.

The first thing that needs to be done for the average Chronic Invalid is to “change his intestinal flora” (microbiome), that is, to suppress the putrefaction in his colon (to avoid toxaemia). The accomplishment of this important change will be indicated by the relief of Constipation, the establishment of the Normal Intestinal Rhythm of 3 bowel movements daily, and the disappearance of the foul odour of the stools, which should have much the appearance of those of a healthy infant and a slightly sour odour.” - Dr John Kellogg, MD in “Good Health”, July 1919.

The Treatment of Morning Headaches

“One of the most common and perhaps the most pernicious of all causes of Morning Headaches; namely, Constipation, or Intestinal Stasis.

Thousands of persons are suffering from the effects of dilatation of the cecum, or adhesions of the appendix or cecum which prevent this part of the colon from rising and passing its contents on to the lower part of the colon, Nature's sewage discharge mechanism.

Such persons suffer from the effects of Constipation even if the bowels move regularly several times a day. Notwithstanding these frequent bowel movements, the colon is never completely empty.

There is always retained in the dilated head of the colon, or cecum, highly putrescent material which is continually sending into the body tissues a flood of poisons, more mischievous in their effects than any other poisons to which human beings are commonly exposed.

Such persons are very likely to suffer from morning headache because the body is so charged with colon poisons, a condition of chronic intoxication even worse in its pernicious effects than alcoholic intoxication, both because of the high degree of virulence of the poisons produced, and their constant presence to the tissues. The complete, mechanical emptying of the colon by Enema every night before going to bed.

The temperature of the water should be from 39 C. to 40 C. degrees and the quantity 250 ml to 500 ml.

The water should be slowly introduced, and should be retained 5 or 10 minutes so as to give it time to reach the head of the colon.

If the water is not readily expelled, it should be managed somewhat differently. The first 250 ml administered should have a temperature of 39 C. to 40 C. degrees; this to be followed by a second pint at a temperature of 27 C. to 32 C. degrees. The warmer water will relax the contraction of the lower colon very commonly present in cases of this sort and so encourage evacuation.

Such an Enema taken at night will not interfere with the morning bowel movement, but will rather have the opposite effect.

This measure (Enema), used on retiring will, in the majority of cases, not only Eliminate the Morning Headache, but will also create an Appetite, and Dissipate the Depression, Confusion, and other Distressing Symptoms which are the common accompaniment of the Matutinal Headache." - Dr John Kellogg, MD in "Good Health", September 1919.

The Hydro-Therapeutic Institute at the University of Berlin

"The importance of Hydrotherapy for medicine begins with its physiological foundation by Winternitz, and with the moment when the previously crude empirical art was given an exact scientific basis.

The Application and Clinical Use of this Most Powerful of all Physical Healing Factors, now lies before us in Decades of Experience and Research, and demands with almost elementary force its integration into Modern Therapy.

While physical methods had long since earned a right to exist in the widest circles of the people, it was Ernst von Leyden great achievement for Germany to have granted them full citizenship in science as well, **and we owe the practical introduction of Hydrotherapy into the field of work and the curriculum of the clinic to his initiative.**

Here alone can this discipline be precisely tested, guided and promoted, from here alone should it be carried into the circles of practical Doctors, and become common scientific property.

The indispensable prerequisite for this is the establishment of Clinical Hydrotherapy Institutes, the awarding of teaching contracts for this field, and the gradual inclusion of it in examination subjects.

The Prussian State has earned the commendable merit of having made pioneering progress in this direction, and of having paved the way with the creation of a Hydrotherapy Institute at the University of Berlin.

The Berlin Hydro-Therapeutic Institution, is divided into a polyclinic, located on Luisenstrasse. The clinic, has a nice waiting room, a side room for utensils, toilet, and a very impressive bright room for the Hydro-Therapeutic Procedures.

To the right of the entrance we find a separate room with resting areas, for packs, Massages and the like, and on the other side small cabins for undressing and dressing.

On the right wall there is a shower cubicle, which contains all common types: cold and warm rain showers, fan, jet, Scottish table, steam showers, all adjustable for hot and cold. A sitting and chapel shower are located on the side wall.

A small area is set up in the floor of the same for water treading, alternating hot and cold foot baths, and for sitting baths. Half and full baths are administered in several tubs, and a tub is also set up for exercise baths.

Two steam boxes, and an electric light box complete the therapeutic furniture.

The interior has low-pressure steam heating, electric lighting, ventilation facilities and an extraordinarily large area of light through windows that take up almost the entire wall area.

The Institute in Munich provides full proof: A glass-vaulted room on the top floor of the local hospital, which can be cooled down by sprinkling cold water if it gets too hot, serves this purpose.

The sand bath in Munich, can also be described as exemplary.

In one container, the sand is heated to 75° C using copper heating coils in which light steam circulates, while the other is used to hold cold sand.

In order to evenly mix hot and cold, the sand is drained from both containers into a wooden mixing bowl at the same time.

This mixing bowl is used for local treatment, and an oak bathtub on wheels is used for full baths. **Thus, one can welcome the establishment of this Institute with joyful satisfaction for the modern development of medicine, for the full recognition of physical-dietary healing methods, and we hope that with appropriate and perfected development it will reach the level it deserves for the benefit of the sick and no less of science."** - Dr Julian Marcuse, MD in "Journal of Dietetic and Physical Therapy", [Zeitschrift Für Diätetische Und Physikalische Therapie], 1902.

Important Life-Saving Measures

"I Consider; The Most Important Life-Saving Measures:

1. **Saline Infusions**
2. **Hydrotherapy**
3. **Drainage**

With Saline Infusion, etc., you stimulate the Emunctory System and get rid of the Toxins. What are the indications in abscess of the Appendix, the Brain, or any part of the body? Free Drainage. What would the surgeon advise in septic infection of the hand, or foot involving the lymphatics of the arm or leg?

When once free drainage is established, with proper cleansing, and disinfection of the part, the local condition improves, the adjacent lymphatics are relieved, and constitutional symptoms subside.

The greater the lymphatic and vascular supply the more active the infection and the greater need for elimination, with adequate drainage.

Irrigation of the uterus and cleansing the tube twice in 24 hours is sufficient.

Strong antiseptic solutions are contraindicated.

They irritate the parts, interfere with nature's process of repair, while mild solutions of boric acid, sterilized water, or normal salt solution cleanse the parts, do not irritate, and aid in repair of the endometrium.

In draining the uterus apply the same principles as are used in abscesses and septic infections in other parts of the body.

The Cold Bath, or Cold Pack in cases with high temperature is often of value, but the hot-pack is more so, especially in weak, anaemic patients.

It favours elimination (cutaneous and renal), tones up Nervous Systems, and tides over the critical period in many instances." - Dr R. R. Kime, MD, in "Some Life-saving Measures in Obstetric Work", Transactions of the Southern Surgical and Gynecological Association, 1900.

It's Not the Bacteria:
It's The State of the Colon

"If the stomach is out of order, if the bile and other secretions are deranged, or if from some temporary or permanent impediment to their passage: they are not poured into the alimentary canal in proper quantity; phenomena totally unlike those characteristic of the healthy state are induced.

Many an infant has suffered from the extraordinary development of bacteria in its alimentary canal, and some children die from the state of things thereby induced. But the bacteria cannot correctly be regarded as the cause of the departure from the normal state. That is to be sought in the secretions, and in the action of the glands prior to the multiplication of the organisms.

I have seen every part of the cavity of the stomach, and of the small and large intestines of an infant filled with curdled milk which had not undergone the slightest digestion, and every particle of which, when under the microscope, almost seemed to be composed of bacteria, so abundant were these bodies.

Sometimes, however, bacteria grow and multiply in the milk of the mother before it has escaped from the breast, and the changes effected in the milk by the growth and multiplication of these organisms, it need scarcely be said, render it quite unfit for the sustenance of the infant; and such milk, were it taken, would, except perhaps in the very strongest children, give rise to serious derangement of the digestive organs. In such a case the maternal secretion must have been out of order at the time of its production, or the bacteria would not have grown and multiplied in it.

It is certain that in such secretions and in the glands that produce them ordinary bacteria-germs are invariably present, but they do not generally increase and multiply until long after the secretion has been discharged from the gland.

There is, probably, not a part of the body of any one of us, of a quarter of an inch in diameter where bacteria germs are not present.

Certainly every time we eat, myriads are carried into our alimentary canals; and every time we breathe, multitudes pass into the air-passages.

So small are these bacterial germs, that they would pass without the slightest difficulty through thin membrane and through the interstices of any of the tissues of the organism in all directions; and yet the public is taught that there is some intimate connection between bacteria and dust, and morbid phenomena.

Ordinary bacteria are indeed harmless enough; they exist in us without disturbing us in any way, but they only grow and multiply in great numbers when circumstances become favourable.

I can give you positive proof that bacteria germs exist not only upon the surface of the skin and mucous membranes, but in the internal organs, in the interstices of healthy tissues, and in the blood itself. The view, therefore, that when these organisms are found in the tissues and internal parts they have entered from without shortly before their presence was detected, is incorrect.

Some years ago, I examined the layers of a fibrinous clot, which had been slowly formed from the blood in the interior of a large aneurismal sac of the aorta of a man who died of the disease.

The body was examined 6 or 8 hours after death.

The aneurism (an excessive localized swelling of the wall of an artery) had existed for many years; and probably some of the layers of fibrin which had been deposited were almost as old as the aneurism itself.

Now I found that in all parts of the firm, laminated, leatherlike material, which served to greatly increase the thickness of the wall of the aneurismal sac, there were indications of disintegrating changes having taken place.

Upon carefully examining minute pieces of the fibrin under high powers, multitudes of bacteria and their germs were discovered without difficulty.

But the older layers in the outer part were here and there softened, and portions of the fibrinous matter seemed eroded, many small masses of soft and broken-down material being present.

All these teemed with bacteria, moving, growing, and multiplying.

Now these bacteria, like the fibrin in which they were growing and multiplying, were within the vascular system and very close to the blood, internal to the several tissues constituting the wall of the vessel, which was dilated to form the aneurismal sac. **From their immense number and from the eroded state of the layers of fibrin, the bacteria must have been growing and multiplying in the lifetime of the patient, and for many months before death.**

The only conclusion: in accordance with the facts of the case and with common sense, is that which I have adverted to, viz.; **that bacteria germs exist at all times in all parts of the body, even in the blood itself during the healthy state.**

As long as the normal state of things exists, the ordinary living bacteria germs in all parts of the organism do not grow and multiply, but when any change occurs of such a character as may result in chemical decomposition, the germs multiply. The multiplication proceeds in decaying tissue elements, although we are alive, just as it takes place in dead animal and vegetable matter out of the body. Under certain circumstances bacteria grow and multiply in the capillaries of a tissue or organ, causing local obstruction or stoppage of the circulation.

And the process will occur in every part of every one of us a very few hours after death has taken place. In face of such facts, it is not reasonable to accept the doctrine that bacteria, fungi, and such like organisms are invariably morbific, or disease-producing, or are of themselves, at least under ordinary circumstances, productive of harm to the organism into which they pass. The theory that such organisms, or closely allied organisms, or their pathologically modified descendants, constitute the actual poison of most of the contagious diseases from which we suffer has been taught and accepted far and wide, and is now by many regarded as a true general principle. **There are many contagious diseases which are not due to bacteria, and it has been shown that many bacteria do not cause any disease at all.** The ordinary bacteria may certainly grow and multiply enormously on the mucous membranes of the body, in follicles of the mucous surfaces and in viscera (intestinal canal, bladder, and passages therefrom), even amongst the elements of healthy growing tissues, without causing any disease whatever. **As you may convince yourselves at any time, millions of such living bodies are unquestionably present during every moment of existence in health on the surface of the dorsum of the tongue. Multitudes, as I have said, pass down the alimentary canal every time we swallow food or fluid. But putrid fluids loaded with bacteria are not innocuous. Organic matter in a state of putrefactive decomposition when introduced into the alimentary canal may give rise to pathological phenomena irrespective of the bacteria it may contain, and from the bacteria present bacterial growth may spread to the destruction of tissues and most important organs, and the poisoning of the whole organism may be brought about in a very short time.**" - Dr Lionel Smith Beale, MD, Government Medical Referee for England, in "On Slight Ailments, and on Treating Disease", 1896.

The State of the Colon: The Frequent Seat of Disease

"You will infer the great importance to be attributed to the large intestines as an object of attention in the treatment of disease. The condition of the large intestines in disease is, therefore particularly worthy of study. They are not only frequently the seat of actual disease, but they are constantly liable to disturbance in diseases of other parts; partly from their intimate sympathies, but partly also from the fact, that, as the alimentary canal is the inlet of so much foreign matter into the system, especially as in disease it is the common receptacle of food and medicine (drugs), it is constantly liable to be disordered from the want of harmony between the articles introduced and the state of the organs receiving them. **The Symptoms that Depend upon the State of the Colon: to speak of this for convenience sake as the representative of the whole tract; do not always exhibit themselves in the organ itself, or, if they do, they are also accompanied by symptoms in other parts, and these are often so considerable that they may be supposed to indicate actual affections of those parts.**

Of this nature are many Headaches, both habitual and occasional, some of them of the most severe character:

1. **Vertigoes**
2. **Palpitations**
3. **Dyspnoea**
4. **Fainting**
5. **Hysterical; And Other**
6. **Affections of the Mind**

The class of symptoms called Nervous, and distinct Neuralgia, wherever situated, if not proceeding primarily from the condition of the colon, are yet greatly influenced by it, and capable of being much alleviated by a proper regulation of its functions.

Multitudes of those Sensations which are the source of so much discomfort to the sick, are traceable to this organ (Colon) as their source; such as General Uneasiness and Restlessness, want of Sleep; Disturbed, unquiet and unrefreshing Sleep; wandering Pains, and Nervous Feelings in various parts, especially in the Legs; Cramps, etc...

When the muscular power is weak or the intestine irritated or inflamed; in such case, the ordinary and necessary peristaltic motion is attended by pain, oppression, tenderness and sympathetic sensations.

In this State of Tension of the muscular and nervous textures, the movements of the flatus are accompanied by acute intermittent pain; whilst its quiescent condition is attended not only by local uneasiness, but by sundry Nervous symptoms agitating both Body and Mind: by Headaches, Dizziness, Faintness, Cramps and Pains in various parts, and These Can Only be Relieved by its Evacuation.

In judging of symptoms proceeding from the state of the colon, whatever may be their cause, the mechanical relations of this organ are to be kept constantly in view.

I refer particularly to the manner in which it is distributed over the abdomen.

The small intestines, it is to be recollected, are collected together in mass in the central parts of this cavity, and sensations from them are referred with great uniformity to this region. With the large intestine it is different.

This surrounds the small, and visits successively nearly every part of the cavity, coming into contact or into near proximity with all the important organs it contains. Hence sensations in the colon are often confounded with sensations in other parts, and vice versa; actual disease in the colon is confounded with disease in its neighbourhood, and, still further, a disordered condition of the colon actually disorders the neighbouring parts themselves.

Various other affections of the colon illustrate the same fact.

Acute inflammation is not unfrequently taken for Pleurisy (inflammation of the pleura); and chronic for Inflammation of the Liver.

The stomach and colon, from their close proximity, mutually affect each other, and so do the colon, womb and bladder.

Various pains, sometimes fixed, and sometimes rambling in the most promiscuous manner from one part of the trunk to another, can only be explained by attributing them to the several portions of the colon, not diseased, indeed, but weak, tender or irritable; such pains are felt in either hypochondrium, in the epigastrium, at the angle of either scapula, across the small of the back often attributed to the kidneys, in the iliac regions and in the hips. Similar pains exist, in other organs when in a corresponding condition, as in the eye, the throat, the stomach, the bladder and the womb, but the erratic character of those to which I refer is due to the mechanical arrangement of the large intestine.

The State of The Colon Has a Varied Influence in Disease

These Considerations Explain why it happens that The State of The Colon is Capable of such a Varied Influence in Disease — an influence often so transient; why, for instance, even under very considerable disturbance and suffering, such marked and **sudden relief is experienced from slight causes, as from a small discharge of faeces or flatus — why symptoms vary so much without any corresponding variation in the state of the original disease which can be detected."** - in "Dr Ware's Lectures on General Therapeutics", The Boston Medical and Surgical Journal, 8 August 1861.

The State of the Colon: A Main Factor in the Causation of Disease

"**The Colon** is the principal organ of the distal gastrointestinal tract.

It plays a vital role in fluid and electrolyte homeostasis, digestion of food, absorption of nutrients, propulsion of intestinal contents and ultimately expulsion of waste products. Disorders of colonic function such as; irritable bowel syndrome, inflammatory bowel disease, chronic constipation and diarrhoea are highly prevalent and cause significant morbidity with a negative impact on quality of life and consequently high socioeconomic costs.

A keen understanding of Colonic Function is therefore required for the successful management of Gastrointestinal Disease. The colon is a complex and responsive structure with function dependent not only on external events and influence of other organs, but also the Maintenance of a Stable Microbiota.

The impact of Diet should not be underestimated.

Diseases characterised by disorders of colonic function are common; for example, chronic constipation affects 3% of individuals and diverticular disease may affect up to 60% of the population over 60 years of age. **Maintenance of Colonic Health is therefore Fundamental to Ensure a Satisfactory Quality of Life."** - in "Advanced Nutrition and Dietetics in Gastroenterology", 2014.

The Disease Can Be Traced to Having Eaten Too Much Indigestible Food

"My experience in diarrhea has been very extensive in 1848-1849; and also, during the last month, I have frequently seen from 50 to 80 patients a day, including dispensary and private patients, most of whom have had **the diarrhæa, now prevalent; in no one instance, have I failed to cure the sufferers, and that, too, in a few hours.**

I have had cases where: cramps existed in the arms, legs, neck, and abdomen, accompanied with diarrhæa; others, where the above symptoms had run to rice-water evacuations; again, other cases, where diarrhæa had existed without cramps, accompanied with nausea and even sickness; and in every instance, I have been most successful with Spirits of Camphor: 1 drop on the tongue; the effect has been truly surprising. In most of the cases I have not had occasion to repeat the dose: the like effect has followed the inhalation of Camphor. I have had patients who had been under the old school treatment for several days, and who were taking astringents without the least benefit.

In some of these, the evacuations had been from 10 to 15 every hour.

It has, indeed, been a source of the greatest pleasure to me to see so rapid a change follow the application of this remedy. One was the case of a child who had been ailing for about a week before I saw it.

The mother described the effects of the Camphor:

> ***"The first dose stopped the cramps which were confined to the arms, abdomen, and chest, the cramps being succeeded by a blueness of the parts affected. The 2nd dose almost cured the purging, of a rice-water kind, which the child had to the extent of 10 times in 30 minutes; and the 3rd dose, which was given in another half hour, completely stopped the purging."***

An hour and a half from the commencement of taking the Camphor, the child was free from all the symptoms of Cholera, efficacious has this remedy proved in the sort of cases described, that I have given no other, always excepting, that **I insist upon Cleanliness and Fresh Air, and on keeping the patient entirely on cold water. Where great burning and thirst exists, iced water is administered.**

If the disease can be traced to having eaten too much indigestible food, and purging comes on 3 or 4 hours after a meal, it is always best to throw up injections (enemas) of cold water into the intestines, that the cause of the irritation may be removed.

It is but natural that purging should follow the eating of too much food of a bad and indigestible nature; and also that the sooner the cause of the irritation is removed, the sooner the patient will recover." - in "Cholera Chemically Considered, Proving the Disease to be a Chemical Change in the Blood", 1854.

Colonic Therapy

"Physicians of all schools today are using various methods of Colonic Irrigation as an Aid to their Treatment.

I prefer what I term a **Colonic Flushing, and which, if given properly and carefully in conjunction with the Osteopathic Treatment, always proves to be a valuable adjunct in the care of a patient suffering with Mucous Colitis (irritable bowel).**

After the patient has emptied the Bladder, and the Lower Bowel, he should be treated thoroughly Osteopathically.

This Relaxes and makes it possible for the fluid to flow farther up into the bowel, and with less discomfort.

Patient is placed on his left side with the knees slightly flexed.

Generally the fluid (water) should be rather hot, about 42° C.

The amount of fluid required depends upon conditions, usually from 1.5 litres to 3 litres, and it should be given slowly.

The slower the flow of water, the easier it is for the patient to take enough to get the desired result.

A great help to this end, is to have the patient place his right hand under the descending colon, and lift up the abdomen.

After giving the amount to be determined by the condition of the patient, the severity of pain produced, the amount of distension, the heart action, and the ability of the patient to retain the fluid, I ask the patient to expel just enough to relieve tension.

Then apply a strong, stimulating pressure to the spine, from the 6th dorsal down, and especially between the angle of the ribs and the spine, in the region of the 11th and 12fth ribs, on either side.

This increases the peristaltic action and helps to empty the bowels.

The patient can stand only 1 or 2 minutes of this treatment before he must hurry to stool.

I still insist upon his return to the table as quickly as possible, and of his retaining as much of the fluid as he can.

I now place the patient in the knee chest position.

Standing at his right side, as I face the foot of the table or bed I pass my left hand under the body, reach over the back and under with my right hand, and then lift the bowel out of the pelvis, forcing it gently up toward the diaphragm, at the same time applying a little pressure to the transverse colon.

This treatment invariably causes a great desire to evacuate, and is followed by a very thorough emptying of the bowel.

The contents expelled often show evidence of hard scales of fecal matter, whose shape, character and extremely offensive odour prove conclusively that thus far the intestines have withstood all laxative or irrigation methods heretofore employed, and that **we have Cleared the Colon of Many Irritating Substances and Toxins which have been Powerful Contributing Agents to this Disease.**

The method is not as severe as it may sound, and may be used in the acute attack without fear of injury or much discomfort to the patient, and best of all with excellent results.

A good non-irritating antiseptic is advisable.

Sodium Bicarbonate solution, 4 grams to 500 ml of water, (Sodium Bicarbonate is changed to carbonate by heat).

In acute cases I give this flushing every day, then every 2 or 4 days as the patient improves.

After the acute symptoms have subsided, I give it every 10 days or 2 weeks to prevent further accumulation in the bowel until nature has restored the normal tone.

Sometimes an Injection (enema) of 150 ml of warm olive oil, to be retained overnight is most beneficial in overcoming Constipation." - in Dr W. C. Carter, DO, "Causes and Treatment of Mucous Colitis", The Journal of the American Osteopathic Association, May 1934.

Colonic Irrigations

"The many names and their meanings testify to the fact that they have been much used for the disease of civilization: Constipation.

The first known book on Colonic Irrigation, in English was translated from a work in French by Combe in 1910.

For 20 years before this time Combe had employed this method of treatment in France, from whence it spread all over Europe and practitioners could be found in practically every city and spa, growing more popular due to his writings.

In the USA, we have had an increasing number of physicians of both the older and the newer schools of healing becoming interested.

By their work and experimentations they have now established Colonic Therapy upon a scientific, and proven basis.

Some of these outstanding men have been Schellberg, RGN of New York, Dr M. G. Spiesman, MD, and Dr Maurice H. Kowan, DO of Chicago, and Dr LeRoy, DC of Seattle.

LeRoy has published one of the few books we have on the subject of Colonic Irrigations and bowel disorders. **Results are the final measure of any procedure and this does bring relief and cure.**

The surgeon uses the roentgenogram and all the facilities of the chemical laboratory to make a diagnosis before he operates.

So do I proceed before I attempt treatment of any bowel disorder, and after having treated several hundred patients I have not had a fatality, though out of this number 3 were first treated in an unconscious condition and pulled from death's door. Leading Physicians and Surgeons all over the world, after apparently forgetting the colon for a good many years, are now turning to it as a Focus of Infection and Intoxication.

We have long ago recognized the teeth, sinuses, tonsils, gallbladder, appendix, prostate and female adnexa as Foci of Infection; and if there is any one fact that has been established in modern medicine it is the fact of focal infection; the poisoning of the system from some hidden nest of bacterial culture within the body which produces all kinds of pathological conditions.

Too many of us examine the patient very carefully for infection of all the organs just named, using all of the diagnostic methods at our command, but when it comes to the bowels we ask the usual question:

"How are your Bowels?", and let it go at that, with a suggestion that a cathartic be taken, or perhaps a low Enema. A cathartic is any substance which causes the bowel to try to evacuate itself

There are 4 classes:

1. A substance which, when taken, acts as a poison of which the body attempts to purge itself;

2. A dehydrant, which draws moisture from the body to liquefy the fecal mass;

3. A lubricant, which lubricates the intestinal tract and softens the fecal mass, making it more easy to pass along the tract;

4. A stimulant and irritant, which stimulates the bowel to increased activity.

The normal colonic mucosa possesses a protective and selective activity against bacteria and toxins, but putrefaction in time produces inflammatory changes in the bowel wall, impairing this protective function.

A deficient toxin-eliminating mucosa thus enables these bacterial opportunists and their Toxins to invade distant sections of the body.

With Constipation we have Chronic Stagnation.

A stagnant, overburdened colon drops and produces a condition of Ptosis.

Colonic Ptosis causes angulations at both the hepatic and splenic flexures.

On account of inflammatory changes resulting from toxic, stagnant, putrefactive faeces the bowel is irritated and frequently this causes spastic contractions.

Spasticity produces exaggerated haustrations and their resulting pockets.

With this mucous colitis develops, followed by a loss of appetite, lack of pep, headaches, malnutrition, flatulence and many allied disorders.

Or, the absorbed toxins may produce marked effects on the Endocrine and Nervous System; resulting in symptoms which vary from slight Irritability and Neurasthenia to Functional Psychosis.

A deranged nervous system may, in turn, disturb the normal colonic physiology by way of the sympathetic system.

Bassler reports 181 different organisms, each within the intestinal canal, and of this number 72 have been proved to be definitely pathological, and were only found in connection with infectious and diseased conditions that they brought about.

There are 50 saprophytic organisms that live on dead tissues and food substances, practically all of which are producers of disease and toxin in the human body.

We also have the end products of protein breaking down, skatol and endol, which are both deadly poisons.

We have also another disorder, rectal pathology, which can be traced directly to colon disorders, but I have seen cases that appeared to have reversed the procedure and by their effect upon the sympathetic nervous system, caused such a retardation of the normal bowel elimination as to cause a constipation habit.

Every physician should look well to the rectum for complications, for complete success is almost an impossibility without first taking care of whatever anal condition is present, no matter how small it may seem, or how dormant it appears to be.

We have the following highly efficient procedure to follow to overcome Colonic Stasis and establish a Normal Intestinal Flora:

1. **Cleansing the Colon of residue and compaction,**
2. **Exercising and stimulating the colon by means of regulated pressure of water and by the use of electrical .stimulant;**
3. **Antiseptic and stimulating solutions to the affected region of the colon and oils lo soften the fecal mass;**
4. **Regulated Diet, Exercise, and habits;**
5. **Re-establishment of normal Bacterial content of the bowel, either by administration of bacteria or by encouraging their growth by supplying proper food or media for their favourable development;**
6. **Stimulation of the spinal nerve centers to the colon and removing inhibiting pressure and contractions.**

I have noticed that practically all bowel patients have 1 outstanding symptom or condition in common, after treatment has commenced, and that is a Debilitated Condition which they pass through during the first few treatments.

These patients show every symptom of a bad Toxic Condition.

Dr LeRoy, DC explained in this way:

> ***"The action of the treating solutions liberates a large amount of toxins clinging to the bowel wall and makes them easily absorbable into the circulatory system and our patient plainly shows all the symptoms of the Toxic Conditions, from which he is really suffering. This condition is soon thrown off with no other ill effects, hut the patient is apt to suffer a period of discouragement unless an explanation is made. Patients readily recognize why there is such a reaction resulting from the removal of a mass of toxins from the body. Impatience to be through the treatment defeats a patient many time; and I will not start to treat unless the patient fully understands the conditions."***

The following answers to the objections put forth to Enemas, or Irrigations of the bowel are largely as given by Dr Spiesman who has, covered the subject very thoroughly.

The first plausible objection to the use of the Enema is that it is not natural.

Admitting this charge, inasmuch as Constipation, Proctitis (or anusitis inflammation of the anus, or lining of the rectum), and Colitis (inflammation of the large intestine) are unnatural, the use of unnatural means to overcome the consequence of these diseases is the only choice left to the physician and patient.

The Colonic Irrigation is such a means.

Eye glasses, false teeth, crutches, trusses and so forth are also unnatural, hut still invaluable aids.

About 75% of normal feces is water.

A cleanly habit ought not to he an objectionable one, especially in cases in which it is most needed to prevent toxic substances from entering the system.

Healthful cleansing, and healing will in time restore the normal tone to the rectum and enable it to evacuate its contents more normally and regularly.

Irrigation lessens, or entirely removes, the irritation of passing feces, and the natural result is that the piles and the tissues loosened by the inflammatory product would more readily prolapse during the act of defecation.

Whatever follows the proper use of an irrigation, even though what follows be annoying, should not be blamed on the irrigation, for its action is most kind, lessening, as it docs, the irritation that otherwise would be more severe when the feces passed through a disease constricted canal.

Frequently after 2 injections (small enemas) all bleeding and prolapse disappear, enabling a successful series of irrigations to be carried out.

As a final word Dr Alvarez, of Mayo's Clinic states in his book Nervous Indigestion: "I have never, in all my years of practice, seen any actual damage done to the rectum or colon by Enemas."" - E. L. Bergstrom, DO, in "JAOA", May 1933

Making Osteopathy More Effective by the Use of Colon Hydropathy

"Assuming that **all other Foci of Infection have been Taken Into Account in the Treatment of a Patient, and that there is not the decided response which was expected, there remains one of the Greatest Sources of Toxins in the Whole Body: The Stagnant Colon.**

A large percentage of human ailments have their origin in the intestinal tract.

In the majority of the stool samples brought to us the stool is composed of small, round, hard lumps, more or less insoluble in water and with a pH of 6.8 to 6.4.

We interpret the stool findings as follows:

The consistency tells us that there is not enough intake of liquid and that the food is remaining in the intestinal tract too long; we observe whether the food is well chewed and well digested, whether mucus, gas or blood are present, whether the bile oxidizes properly, and whether or not occult blood and undigested fats are present; the pH indicates favourable or unfavourable bacterial media.

Fluoroscopically, there are certain characteristics of the bowel which produce the small, round and hard type of stool.

The X Rays, reveals a large cecum; a "cesspool", with occasional incompetence of the ileocecal valve, a transverse colon about normal in size but badly ptosed and with sharp angulations at the hepatic and splenic flexures, a descending colon with varying degrees of spasticity accentuated at the junction with the sigmoid, and an atonic and dilated rectal pouch.

A patient presenting this type of stool is usually the one who is easily fatigued, bruises easily, has been subjected to one or more operations, and is nervous, irritable and discouraged.

In other words there is **a Generalized Toxemia, accompanied by a Muddy Complexion.**

A gastric analysis in these cases almost invariably shows hypo-acidity.

In beginning the treatment we place this patient on a diet of citrous fruit juices.

This gives the intestinal tract a complete rest.

We irrigate daily for the first 5 days using normal salt with Bicarbonate of Soda.

The Colonic Irrigations rapidly eliminate the poisons, from the colon and provide a mechanical stimulus to the muscular walls.

After the first week Osteopathic Treatment is given.

Experience; has revealed that patients respond to Osteopathic Treatment much more quickly and the treatment is much more satisfactory, conducted in this manner.

It must be remembered that these are chronic patients.

How quickly the patient returns to a full diet, depends upon how well the bowels are functioning.

If the patient is bothered with gas we try to eliminate the gas forming foods and gas producing combinations.

If the gastric analysis shows hypo-acidity we add dilute Hydrogen Chloride (HCI) to the diet.

Variations are made to suit the individual case.

We try to check all other possible sources of Foci Infection such as: Teeth, Tonsils, Rectal Crypts, etc.

We insist that the patient take proper breathing exercises and go to the stool by the clock each day.

The treatment is sometimes long and tedious for both the patient and the physicist in, but the end results are most excellent in the majority of cases.

We make each patient a flat rate which includes all we wish to do for that individual and so instead of the patient counting the number of times it will be necessary to come to the office and stopping too soon on account of the expense we have full cooperation both in the number of visits necessary and anything else we wish to do. Another chronic type is the patient suffering from spastic colitis.

The stool may be slimy, in color, mucus plainly visible and a varying pH.

These patients are very difficult to treat Osteopathically.

Lesions are hard to correct and recur easily. However, on a regimen similar to the one heretofore outlined results are much more striking.

Gastric analysis reveals hypoacidity and so Hydrogen Chloride (HCI) is added and a very bland diet prescribed since the colon is spastic.

We have found the product known as Maolin to be very helpful in these cases. Small retention Enemas are also beneficial in relaxing a spastic colon.

The patient instils a small amount just before retiring.

It is a good plan to alternate with warm oil.

The relaxation of the musculature of the splanchnic region due to the elimination of poisons is quite noticeable and lesions here are much more easily corrected and are less likely to keep recurring.

In the above we have considered only the chronic cases.

We should like to emphasize the remarkable results obtained in combining Colonic and Osteopathic Therapy, in the cases of Acute Infectious Diseases, and in some of the Acute Intestinal Disorders. Infectious Diseases of childhood respond much more quickly if the intestinal tract is thoroughly cleaned out, and Colonic Irrigations are much more effective than Enemas in this.

We have had many high temperatures which were very difficult to reduce with usual measures but in about 20 minutes after an Irrigation began to drop and continued to drop until within a safe range.

We have used Colonic Irrigations with splendid results in:

1. Measles.
2. Otitis Media.
3. Influenza.

Other Acute Conditions where Colonic Irrigations Are Very Effective in combination with Osteopathic Manipulation are certain types of bowel stoppage. We are extremely careful with these cases.

First a retention enema is given to soften the feces and hot packs are used on the abdomen.

Next manipulative treatment is given with special attention to the eliminative region. Then an irrigation is given, using only small amounts of solution and with frequent returns.

There is no manipulation of the abdomen.

If the solution is not returned promptly more manipulation is applied to the splanchnic region usually with good results.

If the solution still is not returned the irrigation is stopped for the time being and hot packs again instituted and the irrigation continued later in the day.

There are many other types of cases which might be discussed.

Colonic Therapy intelligently applied, makes Osteopathic results much more striking than otherwise." - Dr Helen C. Magoun, DO, in "Making Osteopathy More Effective by the Use of Colonic Therapy", The Journal of the American Osteopathic Association, May 1934.

> ***"When toxic substances are present in the food taken or as the result of fermentative or putrefactive process, and are absorbed into the blood stream rapidly, the effect upon the system may be profoundly depressing.***
>
> *The phenomena usually associated with surgical collapse may be present.*
>
> *The treatment must be energetic, and careful if the most rapid recovery is to be secured.*
>
> ***Colonic Irrigation is useful in promoting the elimination of the toxins from the body.***
>
> ***The rather heavy, energetic treatment which increases the mobility of the spinal, and costal articulations is also efficient.*** *The ribs should be well raised.*
>
> *Care should be taken to avoid reflex muscular contractions, especially in the suboccipital, and cervical areas." - in* ***"Clinical Osteopathy",*** *1917.*

> *"For an Enema, use water, at a temperature of 40° C. or a temperature that is comfortable to the arm.* ***For reducing Fever, plain water at a suitable temperature will often bring about the desired result.***
>
> ***The Indications for Colon Irrigation may be the same as for an Enema.***
>
> ***Usually an irrigation is considered a more extensive flushing of the lower bowel.***
>
> ***The most important indications are for the reduction of Fever, and the removal of intestinal contents, either gas or toxic material. It is probably the most efficient, quickest, and most harmless way of getting the intestinal tract emptied.***
>
> *For Pyrexia (High Temperature Fever of 38 C. or more), the temperature of the water may be cool." - in "Diseases of the Respiratory System in Infants and Children", 1927.*

Irrigation of the Colon

"Irrigation of the Colon: This is a measure is of great benefit when properly used. It has been suggested as an antipyretic measure. The continuous irrigation already referred to is a measure of the greatest benefit in conditions such as sepsis, and failure of elimination by the kidney.

Rectal Feeding

This method of nourishment is a valuable one when all others have failed, and may be the means of tiding over a desperate case until nourishment can be given in other ways. The food for administration in this way should be as near as possible free from fat and completely peptonized. In this connection might be mentioned the great benefit obtained from the high colon injection of water in cases of deficient kidney excretion, as the absorption from the colon is both rapid and prompt. The method of Murphy suggested originally for use in septic peritonitis in both adults and children, viz., the continuous rectal injection may also be employed to advantage. It might be well before the injection of the nutrient enema to give a preliminary Colon Irrigation to thoroughly cleanse the lower bowel and render it more absorbent. Colon Irrigation once daily with the normal salt solution is of great benefit, especially early when the nausea and vomiting are features and there is so much loss of fluids.

Chronic Parenchymatous Nephritis

Treatment: Protection from exposure is most essential. Warm, part-wool underclothing should be worn. Careful regulation of the diet, milk, carbohydrates, cooked fruits, buttermilk and cereals can be used. Red meats, eggs, fish, animal broths, should be avoided. **The bowels should be carefully watched. Occasional purgation is indicated with irrigation of the colon and warm baths; water should be given freely.**

Functional Diseases of the Nervous System Convulsions

The nervous system is so subject to reflex stimuli. Among these stimuli are the toxins generated at the onset or during the exanthemata, toxins generated in the gastrointestinal tract, rachitis, phimosis, dentition, and a host of other conditions may, reflexly, cause convulsions.

Treatment

Judiciously applied the relaxing effect of a plain full bath or of a mustard bath may be very pronounced. The next indication is to remove the cause if possible. Because of the frequency of toxins from the intestine being the cause, as soon as the child can swallow, a dose of castor oil should be administered to

completely empty the intestinal canal. A Colon Irrigation should be given early. This may be cool if there is much Fever. Rest and quiet are most essential." - in "The Diseases of children", 1913.

General Anesthesia

"Preparation of the Patient: Too much stress cannot be laid on the value of the preparation of a patient for the administration of an anæsthetic. In great measure the success of the anesthesia is in proportion to the thoroughness with which a patient has been prepared for it. The first step, and one of the most important, is having the patient placed in the hospital at least 24 hours previous to the operation. This is too frequently not observed by our surgeons. In many instances the patient is sent to the hospital only a few hours before the operation. Under such circumstances no patient can be properly prepared, the result being that in many cases we have an unsatisfactory anesthesia. On arriving at the hospital, the patient should be put to bed immediately, a purgative given (preferably castor oil), from this time on only soft or liquid foods should be allowed; absolutely no food should be given for at least 6 hours prior to the operation. Instead of following the time-honoured course of enemas which is usually given, better results have been obtained by Bowel Irrigation. Plain warm water is used, and the irrigation kept up till the return flow is absolutely clear. The bladder should be emptied just before the time set for the operation to begin.

Treatment of Complicated Cases

The most dangerous and most intractable cases of Influenza are those complicated with Catarrhal Pneumonia. If diarrhoea is troublesome and streaks of blood appear in the stools, Irrigation of the large intestine with Hot Water, Appears To Be The Most Satisfactory Method of Treatment.

Gastrointestinal Conditions

The First Indication is the relief of the spastic state which is generally present.

The removal of scybala and the relief of spasm are best effected by means of Saline Irrigation.

Colonic Irrigation

In cases of:

1. Inflammation of the colon
2. Chronic Colitis
3. Post-Dysenteric states
4. Chronic Proctitis

Colonic Irrigation Is Useful.

Accumulations in the higher parts of the colon may be removed by Colonic Irrigation." - in "**The Oxford Index of Therapeutics**", 1921.

Sanitary Value of Cleanliness

"Among the agencies which the experience of the human race in all ages has demonstrated to conduce to the preservation of health; "Personal Cleanliness" occupies the foremost position. The enormous surface occupied by the skin, supplied as it is by all the nervous and vascular accessories of the glands, marks it as one of the chief, if not the foremost, depurative organs of the body.

The fact, too, that the skin is the chief heat regulating organ renders it the most important in the human economy. To maintain its function in its integrity has so long been regarded the principal object of Personal Hygiene that this brief reference must suffice. Every Saturday evening, says Hufeland, people formerly went in procession through the streets, beating on pans to remind the lower classes of bathing, and the tradesmen who labored at dirty work washed off in the bath that which now adhered to them.

In the Middle Ages, during the prevalence of Leprosy, Bathing was regarded as a religious duty. Baths were made a part of convents and hospitals by pious people, who gladly contributed to this benevolent purpose.

Being entirely gratuitous to the poor, they were called "Balnea Ammarim" (Soul Baths). A portion of the ceremonial of the bestowal of knighthood was the taking of a bath." - in "The Annals of Hygiene", January 1897.

> ***"Upon him that is to be cleansed from the leprosy seven times, and shall pronounce him clean; And he that is to be cleansed shall wash his clothes, and shave off all his hair, and wash himself in water, that he may be clean."*** *- Leviticus 14:7-8*

Chapter 32

Hydropathy

*"****Having read somewhere that Cold Water drinking was a good remedy for fever, Benjamin Franklin resorted to this simple remedy on several occasions when suffering from Fever, and found himself cured thereby. On one such occasion, he states that he drank water very freely and then sweat profusely most of the night, and found himself well in the morning.****" - in "Franklin's Hydrotherapy", Good Health, February 1919.*

The Physiological Basis of Hydropathy

"Scientific Hydrotherapy will not be widely used in private practice until it is accurately taught in the schools.

In 1902, 13 out of the 19 German Universities gave special courses in Physical Therapeutics, many of which were devoted to Hydrotherapy.

In America, on the other hand, not one university gave a similar course.

In the introduction of that splendid system of medicine "Die deutsche Klinik", Professor von Ley den describes the German clinic as it exists at the beginning of the twentieth century.

It is significant that over half of this essay is devoted to therapeutics and attention is chiefly paid to methods of treatment without drugs.

Modern therapy in Germany is becoming more and more to mean Physical Therapy, and of all the branches of Physical Therapeutics Hydrotherapy has the widest field of usefulness.

Von Mering's textbook of medicine indicates probably more accurately than any other work the position Hydrotherapy holds in the university clinics of Germany.

It is composite work prepared by 14 of the leading medical teachers.

In the 1st Edition, in 1901, **there are References to Many Diseases in the index under "Hydrotherapy" and "Baths."**

In the 3rd Edition, in 1905, all reference to Hydrotherapy has been omitted from the index, and the word "Bath" does not appear there.

On examining the body of the work, the reason is evident, to have indexed all the diseases for which Hydro-Therapeutic procedures are recommended would have meant the enumeration of nearly every clinical condition described in the work. Hence, **To Mention Hydrotherapy in the index would have been of no more value than to list all the cases for which pharmacotherapy was advised.**

Von Leyden said that the:

> ***"Dietetic and Physical Therapeutic Methods should be studied, developed, practised and investigated."***

These words have evidently been heeded.

Another quotation of von Leyden's that Bum has selected as a motto for his "Lexikon der Physikalischen Therapie", indicates the direction of therapeutic development in Germany:

> *"Physical Therapy should be utilized not in the clinic alone, it must become the common property of general practitioners."*

In America the influence of this new movement in therapeutics is yet scarcely apparent. Here diagnosis is still supreme.

As in the days of Frerichs and Traube in Berlin, that physician is the most famous who can say to his students after an autopsy: "We have found everything exactly as we expected."

The therapeutic movement in Germany began with the abandonment of the search for drugs of supposedly specific action.

The result has been that most of the physicians of this country can be divided into 2 groups; those whose therapeutic unbelief or skepticism has lead them to pay little or no attention to treatment, and, secondly, those whose reasonless faith accepts without question the claims of the exploiters of proprietary medicines.

Excellent works on hydrotherapy have been published and they are having an increasing sale.

The admirable textbook on hydrotherapy by Dr Baruch has been translated into German, an honour rarely accorded to any American medical author.

The Hydrotherapy, includes the use of water in its 3 Physical States:

1. Solid,
2. Liquid,
3. Gaseous.

The water acts chiefly as a medium for the conveyance of temperature.

The greater the variation of temperature between the water used and the body, the greater the thermic irritation. Although both cold and hot applications exert a thermic irritation, the effect of the 2 is widely different.

Mechanical irritation is frequently combined with thermic irritation in Hydro-Therapeutic procedures. The mechanical irritation is best exerted by the "douche treatment." The essential feature of the douche treatment is the impact of a stream of water upon the surface of the body.

By varying the pressure and temperature, the mechanical and thermic irritation may be increased, or decreased as desired.

In all treatments with cool or cold applications it is essential that a reaction should occur at the close of the treatment.

By reaction is understood, a secondary dilatation of the cutaneous vessels following the primary contraction which the cold application produces.

In order to insure a good reaction cold applications are almost always preceded by some heating procedure.

In Hydro-Therapeutic institutions, hot-air baths, vapour baths or light baths are generally employed for this purpose.

Exercise or Massage is frequently of service in promoting a good reaction after a cold application.

It will thus be seen that Hydrotherapy is not employed alone, but is combined with Thermotherapy, Light-therapy and Mechanotherapy (the employment of mechanical means – manual therapy - for the cure of disease, turning movement into tissue healing).

There is a widespread error even among physicians that Hydrotherapy is limited to cold-water treatments. Other common misconceptions are that Hydro-Therapeutic treatments exert little or no influence on the body; that no matter how applied, they are harmless and act chiefly or entirely by suggestion.

Investigation, however, shows that there are few drugs in the pharmacopeia which, in therapeutic doses, have such an influence upon the animal economy.

Cold water is the safest and the most powerful antipyretic (ability to reduce fever). Still more important therapeutically is the stimulating action of cold applications on the Vaso-Motor Center.

This probably explains the beneficial effects of cold baths in typhoid fever, as Romberg and Pässler **have shown that the so-called Heart Failure in Acute Infectious diseases is usually due to Paralysis of the Vasomotor Center.**

Cold baths stimulate the sensorium. This action was recognized years ago in the Treatment of Delirium and Somnolence in Fever.

It is also seen in the feeling of well being induced by properly administered cold applications to persons in health.

Lukewarm baths have a sedative action, and are one of the best means of overcoming Insomnia.

Modern Hydrotherapy is founded on the solid rock of physiological and pathological knowledge.

The work of Wilhelm Winternitz should never be forgotten by students of Hydrotherapy.

The Physiological Basis of Hydrotherapy is well presented by Matthes in his textbook “Lehrbuch der klinischen Hydrotherapie”, 1903.

Over 100 pages are devoted to the consideration of **the action of Water Treatments on the functions of the human body.**

Water Exerts its Most Pronounced Effect Upon the:

1. **Circulatory,**
2. **Respiratory,**
3. **Nervous Systems.**

Cold or hot irritation applied to the skin not only acts directly upon the surface treated, but reflexly through the central nervous system upon the circulation in other parts of the body.

For example, if the hand be plunged into cold water not only the vessels of that hand become contracted, but of the other hand as well.

It has been demonstrated that cold irritation of short duration applied to the feet of a rabbit produces contraction of the vessels of the pia mater.

Of great importance therapeutically is the fact that the circulation in the abdominal organs is influenced by the application of heat or cold to the surface of the body (Brieger).

Hydro-Therapeutic Procedures have a pronounced influence on the Blood Pressure.

Those irritants that cause a contraction of the vessels lead to an elevation, while those that produce a dilatation cause a sinking of the blood pressure.

Hence, the general statement can be made that cold applications raise the blood pressure, while warm applications lower it. The action of the heart and the frequency of the pulse are likewise influenced by thermic and cold irritants.

Cold applied locally over the heart or to the entire body diminishes the frequency and increases the force of the cardiac contractions, while the warm irritant increases the pulse rate.

Carbon dioxide baths exert the most marked effect on the heart.

The minute carbon dioxide bubbles which cover the entire surface of the body act as powerful mechanical Stimuli.

In cases of dilated heart I have frequently observed a temporary reduction in the transverse diameter, as determined by percussion, amounting to 3 cm or more.

Cold procedures cause a local increase in the number of erythrocytesand leucocytes in the capillary circulation.

Warm procedures, such as hot full baths, hot air and electric light baths, produce an increase in metabolism, especially in the breaking down of non-nitrogenous substances.

In hot full baths this increase in oxidation has been shown to be more marked than that which occurs in fever. With the application of intense heat, especially if often repeated, there is increased destruction of albumin.

The sudden application of cold to the surface of the body, especially to the back of the neck, produces a deep inspiration, and at its height a pause.

This is followed by deep respirations, usually of increased frequency.

Heat irritation, on the other hand, leads to respirations of increased frequency and generally of more superficial character.

Both the Cold and Warm irritants, long continued, diminish the sensibility of the peripheral nerves.

The value of long-continued warm applications over the abdomen in cases of gastric or intestinal pain, is probably due in large part to the resulting hyperemia of these organs.

In certain cases the beneficial effect of hot applications to the abdomen in intestinal disease is due to the action of the heat irritant on the smooth muscle of the intestine, producing a lessening of peristalsis, and relaxation of the intestinal wall. **A single energetic hot air bath may lead to a loss of sweat amounting to more than a litre. In one of my cases it amounted to 1,500 grams.**

That this great secretion of sweat influences profoundly the whole circulation of blood and lymph.

It is of undoubted value in the elimination of morbid products.

It has been shown that in renal insufficiency the abnormally high molecular concentration of the blood can be reduced by sweating and it has been recently found that in these cases the low nitrogen content as well as the molecular concentration of the sweat is considerably increased.

The importance of the increased secretion of sweat in the elimination of various poisons, including lead, mercury and bacterial toxins, and in the elimination of pathogenic micro-organisms, should be mentioned.

The procedures which elevate the blood pressure and improve the general circulation cause an increased diuresis.

This is especially marked after the administration of carbon dioxide (Nauheim) baths.

Excessively cold procedures may produce hemoglobinuria and albuminuria.

Hydro-Therapeutic Indications

In the Treatment of a Great Number of Diseases Hydro-Therapeutic Procedures may be used to advantage.

They should, of course, be employed in conjunction.

A full tub bath at 32° C., of 15 to 30 minutes duration is better than Trional (sedative-hypnotic and anesthetic drug) in insomnia, and hot compresses to the abdomen in gastric ulcer are preferable to Morphine.

The great variety of effects produced by water of different temperatures should be specially emphasized.

According to the temperature employed, the blood pressure may be raised or lowered, local congestion, or anemia produced the pulse-rate increased or decreased, respirations quickened or deepened, and the action on the sensorium may be stimulating or depressing. In many incurable diseases properly selected Hydro-Therapeutic measures are distinctly beneficial. They make the patients feel better, eat better and sleep better. I believe that more attention should be paid to the treatment of this distressing class of cases.

To keep a patient with inoperable malignant disease or chronic nephritis comfortable, or at least to make the downward journey as easy as possible is no small thing.

Some Hydriatic procedures are so mild that they may be given with benefit and without danger to very feeble patients.

The important place of Hydrotherapy in the Treatment of Neurasthenia, and in other Psychoneuroses is so well known as to completely overshadow in the minds of many its other fields of usefulness. It is true, that Hydrotherapy achieves equally good results in other diseases.

Increased experience with Neurasthenia has impressed me with the truth of Binswanger's dictum in regard to Hydrotherapy in this disease: "that the success of any Hydriatic Procedure can never be predicted, and the individual reaction of the patient is decisive." I agree with v. Strümpell in "Die functionellen Neurosen in Penzoldt-Stintzings Handbuch der spes", Therapie, 1903, and Matthes "Lehrbuch der klinischen Hydrotherapie", 1903, that the Water Treatment in Neurasthenia acts chiefly as a Psychical Influence.

An electric light or hot air-bath, followed by a cool application usually gives rise to a general feeling of well being. This doubtless produces in many sick individuals a powerful Heilsuggestion. The benefit I have seen in many cases has been so marked and so sudden as to make this explanation the most plausible one.

Good effects have been much more striking when treatments were carried out at the Hydro-Therapeutic institute than when they were given in the home of the patient.

The action of the procedure on the body would be the same in the two places but the action on the mind might be very different.

Non-Commercial Hydro-Therapeutic Institutes

In Boston a successful experiment has been made in professional co-operation.

In the fall of 1903 a Hydro-Therapeutic Institute was established by a number of physicians interested in the securing Hydro-Therapeutic facilities for the benefit of their patients.

At that time the attention of the profession was called to this enterprise in the columns of this Journal, and a plea was made for more attention to this Department of Therapeutics.

The second year of its work has just closed and it is a pleasure to report that it has been a financial as well as a therapeutic success.

During the past year the receipts from patients was sufficient to make the establishment self-supporting, and was a gain of 70% over the preceding year.

Equally gratifying is the increase in the number of physicians who have referred patients to the medical baths, and the increase in the number of disorders that have been treated.

At first we received:

1. Neurasthenic, and
2. Rheumatic cases almost exclusively.

During the last few months among the maladies treated have been cases of:

3. Heart Disease
4. Chronic Parenchymatous Nephritis
5. Chronic Interstitial Nephritis
6. Obesity
7. Arteriosclerosis
8. Tuberculosis
9. Severe Cerebral
10. Spinal Diseases

Recently instruction in Hydro-Therapeutic procedures was given to the Senior class of the Harvard Medical School. This Institute, or the Medical Baths, has done much to give dignity to scientific Hydrotherapy in this community.

The establishment of similar Institutions in other cities could not but help **to develop interest in this important but neglected form of treatment.**

Admirable quarters were secured on the upper floor of a modern office building. Plenty of Air and Sunshine was thus obtained.

The rooms were attractively furnished.

A complete Baruch-Richter apparatus for douche treatment was installed.

This form of douche table with its facilities for regulating exactly the different temperatures is probably equal to any in the world.

The success attained by Dr Putnam and his colleagues in this enterprise has led nearly every hospital in the city to formulate plans for adding a Hydro-Therapeutic Department to their Equipment." - Dr Joseph H. Pratt, AM, MD, Massachusetts General Hospital; Assistant in the Theory & Practice of Physic, Harvard University, in "On the Development of Scientific Hydrotherapy", Boston Medical and Surgical Journal, 25 January 1906.

> ***"The Toxic Element in disease is what nature is trying to eliminate. Even the last "death sweat" is put forth to eliminate toxins from the system, and even then we may save the life by neutralizing the toxins by the warm Epsom sponge bath and constant large applications of warm Epsom water to the body. Some years ago we wrote that no one ever died under an application of plain Epsom water, and we are satisfied that the saying is true yet. The toxins are fast strangling the life. All nature's efforts are to eliminate them, and we can help her to a wonderful extent. During the last few hours toxins form very rapidly in the system, and we must match our efforts to the same."*** *- Dr William Harvey Burgess, MD, in "Little Ailments and Consequences", 1912.*

Homeostasis and Thermal Stress

"The signs of Heat Stroke are: **Fever increased body temperature (up to 47°C), Dizziness, Weakness, Confusion, Drowsiness, Nausea, Anorexia, Anxiety, Headache, Disorientation, Tachypnoea and Hyperventilation leading to alteration in Acid Base Balance.** Treatment involves reducing the heat load, increasing heat loss, **prevention of any convulsions and seizures and establishing correct water, salt and acid base balance.** These and the physiology, biochemistry and clinical aspects of heat stroke." - in "**Heat Stroke and Temperature Regulation"**, 1983.

The Effects of the Toxic Burden Upon the Body Varies with the Time of Year

"During the course or investigations which have been made during the past 2 years on the transmission or immunity to diphtheria toxin in guinea-pigs it was observed that a seasonal variation in the dose was necessary in order to cause the death of control animals. **This variation was seen to follow somewhat the time or year at which the teats were made, so that during summer a larger dose was necessary than during the winter. We found also that in winter a guinea-pig took a longer time to come up to the standard weight of 250 grms., than in summer, and that the lethal dose varied directly with its age. The loss in weight of guinea-pigs in the first few days after an injection may often be taken as an indication of the day upon which the animal will die.** The ratio between the loss in weight and day of death **varies with the time of year.**

Summary

1. A larger dose of toxin is necessary to kill a guinea-pig of the same weight in summer than in winter.
2. The rate of growth of guinea-pigs is more rapid in the summer months.
3. The weights of guinea-pigs are least affected by lethal doses in summer.
4. For guinea-pigs of the same weight the fatal dose increases with the age.

Conclusion

These results show that it is of importance when dealing with the fatal dose of a toxin, or with any conclusion drawn from the loss in weight of an animal, **to take into consideration the time of year when the experiment was performed."** - Henry J. Südmersen, A. T. Glenny, **from the Wellcome Physiological Research Laboratories,** London, in "Variation in susceptibility of guinea-pigs to diphtheria toxin", Journal of Hygiene, November 1909.

"The undisputed credit for placing Hydrotherapy on a Physiological Foundation and introducing it into the ranks of the Healing Sciences goes to the Court Councilor, and University Professor Dr Wilhelm Winternitz, Vienna.

I will present my experiences on the effects of water, gathered from a large number of patients from a wide variety of backgrounds. My work over a period of over 20 years at one of Austria's largest and most outstanding Sanatoriums, offered me ample opportunity to learn about, and appreciate the great successes of rationally implemented Hydro-Therapeutic Measures. I was frequently able to study the Extremely Beneficial Effects of methodically practiced Water Cures. The entire Hygienic, and Dietary Regimen must be strictly organized and regulated if one wants to achieve anything beneficial. If this already applies to the use of water in so-called strengthening, hardening, and refreshing cures, how much more must the supreme postulate be kept in mind and implemented in the Hydriatic Treatment of pathological conditions: strict individualization!" - in "Kurzgefasste Practische Hydrotherapie", July 1902.

Fundamental Indications in the Treatment of Typhus

"The Fundamental Indications in the Treatment of Typhus: Alongside modern methods, old ones, such as Hydrotherapy, are regaining their value; that experiment has justified Water Treatment for Typhus, but that it is the task of the clinic to limit this to its limits. Of greater value than therapy, however, will be the prophylaxis of Typhus, whose prevention, like Tuberculosis, is a social problem. The means to achieve this lie in natural immunity, in the provision of good drinking water, healthy housing, and nutrition." - in "The Lancet", 6 December 1902.

The Treatment of Menstrual Disorders of Utero-Ovarian Origin

"Amenorrhea or Metrorrhagia are Not clearly defined types of disease. They are usually the result of the same cause: a Functional Disorder of the uterine Vasomotor System, which is often caused by poor general health or a systemic disease, such as tuberculosis. In such disorders, medications are ineffective because they have to travel a long distance before they can exert their influence on the nerve cells. Only physical methods that affect the Vasomotor Center are effective here. These Methods include:

1. Aerotherapy; Climatotherapy,
2. Phototherapy,
3. Electricity,
4. Massage; Mechanotherapy,
5. Hydrotherapy (and Mineral Water Treatments)." - in "Le Progrès Médical", 1902.

Water The Principal Chemical Constituent Of The Human Body

"Water (total body water) is the principal chemical constituent of the human body. For an average young adult male, total body water is relatively constant and represents 50% to 70% of body weight.

Variability in total body water is primarily due to differences in body composition. Total body water is distributed into Intracellular Fluid (ICF), and Extracellular Fluid (ECF) compartments.

The ICF and ECF contain about 65% and 35% of total body water, respectively.

The ECF is further divided into the interstitial and plasma spaces.

Water balance represents the net difference between water intake and loss.

When losses exceed intakes, total body water is decreased. When body water deficits occur from sweat losses, a hypertonic hypovolemia generally results.

Plasma volume decreases and plasma osmotic pressure increases in proportion to the decrease in total body water. Plasma volume decreases because it provides the fluid for sweat, and osmolality increases because sweat is ordinarily hypotonic relative to plasma. **Human water and electrolyte needs should not be based on a "minimal" intake, as this might eventually lead to a deficit and possible adverse performance and health consequences."** - in "Human Water and Electrolyte Balance", Present Knowledge in Nutrition, 2006.

"Toxemia can cause stroke, as well as blood clotting difficulties. High blood pressure always warrants the attention." *- in "Foods & Nutrition Encyclopedia", 1993.*

"About one third of deaths today are due to disease of the heart and circulation. Any generalized Toxaemia may be associated with cardiac weakness. Severe pneumonia *(particularly those due to staphylococci and Frielander's bacillus), typhoid fever etc.* ***can all be associated with myocardial damage."*** *- in "Essential Cardiology", 2012.*

Influenza And Its Treatment

Early Diagnosis

"Most persons have Influenza 1 or 2 days before they or their friends recognize the fact. The fever often reaches 37.7° or 38.3° C. before the patient feels the severity of the ache or pain that accompanies it.

A slight rise in temperature is often the first symptom, which may be noted by some congestion of the eyes and a flush on the face. Often there is a slight headache and more or less nausea, with fever ranging from 38.3° to 40°. It is exceptional for the fever to run up to 40° or 40.5°. **Such high temperature is always the result of poor elimination, and calls for heroic eliminative treatment.**

Constipation rather than diarrhoea is met with in most cases.

Influenza Symptoms

The symptoms are not different from those of a Common Cold.

They are, generally:

1. Chilly Sensation;
2. Tired Feeling,
3. Lameness,
4. Sore Feelings All Over the Body;
5. Pain in:
   a. Back,
   b. Legs,
   c. Arms;
6. Cold in the Head;
7. Sneezing;
8. Red Eyes that water freely;
9. Loss of Appetite;
10. Probably Constipation;
11. Rapidly rising temperature.

One symptom of the disease mentioned by some writers is an enlargement of the tongue, which appears straight and full, and often shows marks of pressure against the teeth.

Treatment

Hydrotherapy, or Water Treatment, has proved to be the very best remedy for this disease.

It must be given with great care, however, in order not to expose the patient unduly. Fomentations to the spine and a hot foot bath in bed are best. If there is a cough or a cold in the head and throat, fomentations may be given to the throat, chest, and face. Follow this treatment by sponging with cool water, alcohol, or witch-hazel under the bedclothes. Keep the room fairly warm, 20° to 22° C., with good ventilation. **In case of high temperature, that is, above 39° C., use sponging, or a pack, or the cool Enema.**

Nature's Cleanser

Water is a natural solvent and cleanser, and it operates inside the body as well as outside. It is the natural element for washing the body tissues.

It dissolves the waste materials of the system, which are then carried out of the body in solution by the various eliminative organs.

Hence it is apparent that a sufficient amount of water must be taken into the body to secure the proper functioning of every organ and gland and to supply the principal medium of elimination.

Both assimilation and excretion require water. Not only is the waste matter washed out by water, but every cell gets its food by means of a watercourse.

The plasma, or liquid part of the blood, is a fluid in which the blood cells live very much as fish do in the sea. When the system becomes loaded with poisons, they must be diluted so they can be eliminated, or thrown off, by the excretory organs.

The principal organs engaged in this work are the:

1. **Kidneys**
2. **Skin**
3. **Lungs**
4. **Bowels**

Elimination by the Kidneys

The kidneys remove more water and poisons from the body than any other organ. Under normal conditions they should remove daily 1 ounce (30 ml) of urine for every 1.36 kg of the person's weight.

Dividing the weight of the body by 3 gives the number of ounces (30 ml) of urine that should be eliminated in 24 hours (16 ounces equal a pint (500ml); 8 ounces equal 1/2 pint (250 ml), or 1 glass); so the average person in good health with normal kidneys should pass about 1.25 litre of urine in 24 hours.

A Clogged Sewer System

When there is not proper elimination, the power to fight disease is lowered, and the person feels dull and stupid. Or he may be restless, and wake up in the night with a nervous headache or backache or a palpitating heart.

The digestive system is out of order. Some consider this a sign of biliousness; others lay it to Constipation; or both conditions may be present, due to a shortage of water in the system. The eliminative organs cannot do their work because of the lack of water. When one or more of the above symptoms appears, it is time to begin checking up on the elimination. Watch the kidneys, double the amount of water drunk, and adopt a light diet with plenty of fruit for a few days. An increase in physical exercise, will increase the demand for water, and will also aid all the eliminative organs in their work.

A Good Remedy for Colds and Grip

Experience has shown that the free drinking of water is valuable in the Cure and Prevention of Colds and Grip, and recently water drinking has been used with wonderful success in the Treatment of Influenza.

When a person is taken with influenza, the eliminative organs must be put actively to work at once in order to help the system fight the disease.

First take a light physic prepared in the following way:

Dissolve one teaspoonful of salt in 4 glasses of water.

This makes what is known as a normal salt solution.

Hot water is better than cold, but if it is too nauseating, cold may be used.

A glass of this drunk every 5 minutes until all is taken usually acts as a physic; if not, it will be absorbed quickly, **and will start the eliminative organs to working.**

From 2 to 4 cups of **hot lemonade, may be taken to advantage** a little while after drinking the salt water, so that from 4 to 8 glasses of water will be taken in about 1 hour.

Such copious water drinking in connection with a hot foot bath and a sweat, and if possible, rest in bed, is a very efficacious treatment.

In influenza the water drinking should be kept up, no less than one glass being taken every 2 hours, so as to secure good elimination.

Drink as much water as can be taken with comfort.

This will aid the body in throwing off poisons, and help in preventing complications.

The Tub Bath

Water as a cleanser for the inside of the body has been considered, but it must not be forgotten that water is important for the outside as well.

Warm baths aid in elimination by opening the pores of the skin.

Prolonged hot baths are weakening; therefore the hot bath should be short, and should be followed by a short application of cool or cold water for the tonic effect.

A brief cool or cold bath, followed by brisk rubbing and quick drying, is an excellent tonic, and most persons would benefit by its daily morning use.

If a bathtub is used, the water should be run in to the depth of about 5 centimetres. The patient, sitting in the tub, should briskly rub the legs, chest, and abdomen; then lie down so that the whole body is wet; then get out of the tub and dry the body quickly with a bath towel.

The Hand Bath

A hand bath may be taken with a small quantity of water in a basin.

The water should be applied quickly, and the body dried at once.

If the patient is inclined to chilliness, only a part of the body should be bathed at a time, keeping the rest covered, first one arm, then the other, then the chest, the abdomen, each of the legs in turn, and the back.

In every case the room should be warm enough to prevent chilling.

If managed carefully, the hand bath should bring a glow of comfort.

If a shower bath is available, the same effect may be secured and the bath may be enjoyed more. Whichever way it is taken, this bath will prove beneficial, as it invigorates the entire system; blood circulation, eliminative organs, and all. The reaction, or warming up, should be immediate.

Constipation

Keeping the body free from its natural waste and poisons requires careful attention to the bowels. Constipation is so common and its effects are serious.

The retention of the bowel contents is productive of great harm, as this putrefying mass contains poisons which are reabsorbed into the system, affecting almost all the organs and impairing their functions.

The circulation is impeded, and the blood quality lowered.

Piles often result, sometimes becoming serious enough to require surgical attention. With a lowered vital resistance, the body is unable to resist colds, and thus the way is paved for other serious ailments.

Headache is a common accompaniment.

One of the most serious results of the poisoning of nerve centers is the mental depression occasioned by it. Little tasks look big, small troubles and grievances are magnified, and hope and cheer are almost lost.

Persons suffering in this way are looking out from an interior where everything is dark. Not only the blood and skin, but the thoughts are dingy.

Common-Sense Remedies

First, cultivate regularity of habit. Going to stool at a certain time daily, even when there is no natural desire, helps to establish bowel regularity.

Neglecting the call to move the bowels causes the desire to pass away, for the peristaltic action of the bowels forces the contents of the lower bowel upward, and the fecal matter passes out of the rectum into the bowel and causes much trouble. If the neglect is long continued, the natural desire becomes less and less until it disappears.

Fortunately, in most cases, even in those of long standing, it is possible to re-establish a correct bowel habit. Special care and treatment will be necessary.

Sometimes **the graduated Enema proves helpful.**

In taking a graduated Enema, begin with an ordinary Enema, and then from day to day gradually reduce the quantity and temperature of the water, until the bowels have learned to move naturally.

Eating an orange or drinking 1 glass or 2 of cold water before breakfast is sometimes helpful. Massage, or deep kneading, of the abdomen, administered by another, the patient lying on the back with knees drawn partly up to relax the abdominal muscles, may be given.

This Massage can be self-administered with some success while seated at stool.

Follow the colon up the left side with a kneading motion, cross just above the umbilicus (navel) , and continue down the right side. The idea is to force the contents toward the rectum, making room for it farther up in the colon. **The use of natural laxative foods is the best remedy for constipation. Figs, prunes, most fruits, ripe olives, fresh vegetables (especially the green-leaf varieties), steal cut oatmeal, rye bread, and bran are especially good.**

There is evidently great benefit in using foods that have not been robbed of their natural elements.

The mineral salts, vitamins, and perhaps other elements are not present in very large quantities, and this very fact indicates that they are of high value in supplying the body with essential health factors.

Persons frequently recover from long-standing Constipation and general lowered vitality upon adopting a dietary containing all the food elements.

Such foods seem to contain some of nature's true bowel regulators and blood tonics. It is pointed out that the aim of any treatment should be to help nature in her fight against disease. Nature prefers her own remedies, such as: Pure Air, Sunlight, Rest, Good Food, Water, suitable Exercise.

Indeed, one of the most effective curative agencies is Water.

Its use in the Treatment of Disease is known as Hydrotherapy, and this treatment is gaining greatly in favour and popularity.

Water Treatments are very effective, often accomplishing results not easily obtainable, if at all, by any other means.

The Laws of Health

In general, the essentials of Health are: Pure Air, Pure Water, Sunlight, Wholesome Food, Proper (natural fibres) Clothing, Exercise, and Rest.

In making use of these essentials, we must apply intelligently the principles of ventilation, sanitation, cleanliness, disinfection, cookery, dress, recreation, and other demands of rational hygiene.

Speaking of healing as the result of co-operation with the laws of nature, brings us directly to the fountain of all life, the God of nature; for nature's laws are all established by Him and are under His control.

It is His will that people should have health, and He gives freely of those things that contribute to health.

When we have become sick through the transgression of nature's laws, we should change our habits of living to bring them into conformity with the natural laws God has established; then we may come with confidence to the Author of life for healing. God as the healer, He is the only one who can heal.

Physical healing is only a part of the restorative work which it is the privilege of every individual to know.

In the Bible sense, True Healing; includes the Healing of the Soul as well as of the Body. Complete healing covers the spiritual as well as the physical being.

Jesus in His ministry among men connected closely His work for the souls of men with that for the body." - Dr George H. Heald, MD, Dr Daniel H. Kress, MD, Dr Wells A. Ruble, MD, Dr Martin M. Martinson, MD, in "Epidemics; How to Meet Them", 1919.

What Causes Influenza

"The following report relating to Influenza was received from the U.S.S. (transport):

During the voyage just completed there occurred another outbreak of influenza "among troops, 263 cases of the disease were admitted to the sick list.

Of these, 8 developed Pneumonia, resulting in 5 deaths.

In this outbreak, the infection was more virulent and the symptoms more alarming. **The suddenness of the onset, the severe Pulmonary symptoms, distressing Gastrointestinal and Mental Manifestations, extreme prostration from Toxemia, and exceedingly slow recovery, were in great contrast to the type of disease as seen in the more recent outbreak, in which fever rapidly declined, pulmonary symptoms were milder, and prostration was less marked.**

Weather conditions, overcrowding, and poor ventilation all played an important part in the occurrence and spread of the disease .

The ship sailed on 30 August with an Army personnel of 3,335, an excess of 110 over normal bunk capacity. For the first 3 days the weather was warm and balmy and soldiers discarded some of their heavy clothing and in many instances their underwear. On the fourth day rough seas and rain were encountered. These lasted for about 3 or 4 days.

On account of weather conditions troops were compelled to stay in their compartments and hatches were battened down with tarpaulins.

The ventilation system, not being completed or effective in most of the compartments, was taxed to its utmost and unfortunately broke down several times. The temperature declined, many of the troops were wet, compartments were overcrowded, and coryza, throat affections, and so-called "colds" broke out among the troops, causing coughing and sneezing. Thus conditions were ripe for the spread of infections of the upper respiratory passages." - in "Notes on the Present Epidemic of Influenza", Notes on Preventive Medicine for Medical Officers, United States Navy", Bulletin No.46, 12 October 1918.

The Treatment of Influenza by Water

"The medical officer in command of the naval hospital, New London, Conn., submits the following notes:

> ***"After trying the various general and special remedies, such as Aspirin and the analgesic or antipyretic coal-tar preparations, in the treatment of influenza without very satisfactory results, it was considered advisable to adopt a course of treatment at this hospital which could logically be expected to have some influence upon the course of the disease rather than one directed solely for the relief of one or more symptoms. With this end in view, 60 consecutive cases were selected at random for Treatment by***

> ***what may be termed an Elimination Method, consisting essentially of the: Administration of Large Quantities of Water, And Other Fluids With Moderate Doses of Alkalies, Diuretics, and Saline Cathartics.***
>
> ***Of the patients so Treated Only 1 developed Pneumonia, and he, contrary to orders, left his bed and exposed himself to chill.***
>
> ***At the same time, and under exactly similar conditions, the rate for complicating Influenza-Pneumonia was about 20% in a series of approximately 800 cases treated without increasing elimination.***
>
> ***While the series of 60 cases is small, it is believed the results justify further trial, as the method seems rational and logical."***

It is reported from the United States Naval Hospital, Norfolk, Va., that in only a few instances have influenza bacilli or pneumococci been found during the present epidemic of influenza.

Streptococci are commonly encountered.

The leucocyte count in uncomplicated cases is rarely above normal and usually below normal. Leucocyte counts after pneumonia has developed frequently rise to 12,000 or thereabout, but more often remain below normal.

A very few cases have shown counts above 20,000, but such cases were associated with extensive lung involvement or pleural effusion, or both.

Pneumonic complications are believed to be invariably of the bronchial type.

Pneumonias simulating lobar pneumonia are due to the extension of small areas, eventually involving an entire lobe.

All deaths from influenza have been considered to be due to the complicating pneumonia." - in "Notes on the Present Epidemic of Influenza", Notes on Preventive Medicine for Medical Officers, United States Navy, Bulletin No.47, 19 October 1918.

The Cause of Death in Influenza: Septicemia (Blood Poisoning by Bacteria)

"Routine procedure of making direct smears from the affected parts and of growing cultures for study was continued on all cases which came to autopsy during the epidemic.

After the epidemic had lasted for a few days it was noticed that bronchopneumonic areas were increased in extent as compared with earlier cases, that is more lung tissue was involved and hemorrhages into the lung around affected areas were so extensive that whole lobes were filled with a combination of consolidated areas and blood clot. Pleurisy with effusion, and the formation of purulent plastic exudates with adhesions were noted more frequently and pericardial involvement, the result of direct extension, was found in many cases.

Cultures now showed the infection to be more truly pneumococcic as pure cultures of this organism were obtained **from the infected parts in nearly every case. Cultures from the heart's blood showed that Septicemia was present in every case where purulent fluid was found in the chest."** - in "A Report on the Findings in 116 Necropsies Performed in the U.S.S. Mercy on Bodies Dead of Influenza", Notes on Preventive Medicine for Medical Officers, United States Navy, Bulletin No.50, 9 November 1918.

The Cold Water Treatment

"The preceding Epidemic of Influenza in the 18 century, however, had been treated in various ways.

Doctor Currie, for instance, emphasized very much the use of cold applied externally, Cold Water particularly being recommended, but cold air was also employed. Doctor Currie was for some years in this country, and was in New York when there was an influenza epidemic, about 1790.

Afterward, he went to England and reached distinction over there.

Dr Alfred Magill, in the prize essay to which was awarded the second prize ever given by the Medical Society of the State of New York, summed up some of Currie's experiences in the Treatment of Fever, in a way which shows that this custom of the end of the 18 century long anticipated Brand and his **Cold Water Treatment in the 19th, but at the same time shows that he realized how much cold air might mean in the treatment of fever, not only typhoid, then called typhus, but in all fevers.**

The scene described so vividly might very well have been a case of Influenza or of Pneumonia approaching its crisis, treated by the open air method.

Doctor Magill said:

> ***"No one can peruse Doctor Currie's recent experience in this matter without being convinced that cold water when properly applied is a most important remedy in case of fever. Its utility is not confined to typhus; it is equally serviceable in all fevers attended with increase of heat and arterial action.***
>
> ***Its effect on the pulse is astonishing in many cases.***
>
> ***We have often known the mere bathing of the hands and arms of a febrile patient to reduce the action of the pulse from 10 to 15 beats to the minute; and if this partial application of cold water has such an effect on the action of the heart, how much greater must be the effect of a cold bath. We have many instances on record of its calming at once the most furious delirium; persons in such a situation have often jumped overboard from a vessel into the sea and been taken up perfectly calm and rational and with an almost complete extinguishment of the fever.***

> ***With many strong instances recorded in various works of its remarkable efficacy in curing fever, it is justly a matter of surprise that physicians so seldom call its great powers into requisition.***
> ***It exercises a more immediate control over the action of the heart."***

" - Dr James Walsh, MD, in "The medicine of our forefathers", Journal of the American Medical Association, 15 November 1913.

> *"It is interesting to note that Sir John Chardin reached his journey's end without relapse, and was ever afterward an advocate of the* ***Persian Method of Dealing with Fever.***
> ***Bruce, the famous African traveller, reports that similar cases were treated in tropical Africa by drinking water only, and by throwing a quantity of cold water over the patient,*** *even in his bed, where he was permitted to lie without attempt to make him dry, until another deluge was added to the first.*
> ***In the face of such facts it is very strange that now,*** *after the lapse of two and a quarter centuries,* ***it is just beginning to dawn upon us that Water is the Great Febrifuge, and that it will accomplish more in the Treatment of both Acute and Chronic Disorders than All Other Remedies Combined."*** *- Dr J. H. Kellogg, MD, in "Persian Hydrotherapy", Good Health, February 1900.*

The Flu Germ Bacilli

Whit the effects of cold and congestion, the body reaches a stage wherein Bacilli of Flu attacks the tissue and mucous membranes of the stomach proper.

This may be shown in its action more in the lower end of the stomach, and near the orifices opening into the duodenum and the small intestines, and acute conditions of inflammation may be produced there.

Bicarbonate of Soda should be given every 3 to 4 hours, until there is the full reaction of same through the alimentary canal, or until this has begun to move the bowel in such a manner as to relieve the system, not causing through same that of inflammation in the lower intestine or colon.

Bicarbonate of Soda (rectified Bicarbonate), 1/3 of a teaspoonful, in a tablespoonful of very fine cracker crumbs, and this eaten, and wait at least 20 minutes after before water is taken in the system for same to be absorbed.

We want to achieve; the full reaction of the over-alkaline condition through the system from the salivary glands to the upper orifice of the stomach proper, or through the cardiac end, so that we will give full reaction to the system.

When the water is taken, let each drink of water taken carry a small pinch of Elm. Do not make the elm water until it is ready, or just before it is ready to be drunk, for this is easy to become rancid, especially where temperature is active

in system; and should it become such conditions as that this would cause the belching of the elm, then change same to that of Yellow Saffron tea; small quantities, of that taken as in drink.

In the proportion of 15 grams of the Saffron to 1 litre of distilled, or rain water and allowed to steep (that is, hot) for at least 20 minutes; not boiling, but steep. Strain and keep cool.

To reduce temperature bathe the spine with rub alcohol.

This especially across the solar plexus or the small of the back, and up to between the shoulders, bathing off the head.

And should temperature arise again from these, ice packs should be used across the lower end of the stomach, or to use again (with continued inflammation), those of Enemas carrying the plain oil, or white oil - not a great deal, but sufficient that the food value in the system is not removed by the strain on the system in the activities of the properties given, to destroy the bacilli, for the bacilli germ of flu may not live long in Bicarbonate of Soda.

This will bring better conditions to the body.

Chapter 33

The Pathogenic Importance of Auto-Intoxication

"The Hygiene of the Alimentary Canal requires a sound and healthy condition of its several parts.

The mouth should receive its share of attention, it should be washed out, especially in the evenings and mornings.

The teeth should be fit for their work; of thorough and slow mastication.

There is no excuse for poor teeth.

They are frequently the cause of disease.

The hygienic importance of water is not appreciated as it should be.

It is nature's beverage and can never be supplanted by artificial substitutes.

Father Kneipp, who was not a scientist, but made up for the lack of scientific training by a liberal supply of common sense, discountenanced the use of artificial beverages as substitutes for water.

Auto-Intoxication from the residual matter in the large intestines is by many considered the most prolific cause of disease, and of the many phases of decay and retrograde metamorphosis included under the head of senility (Bouchard, Metschnikoff).

Metschnikoff thinks that health (life) depends upon the degree of phagocytic power possessed by the corpuscular elements of the blood.

The problem of sustaining life (health) consists in preserving the fighting quality of the red corpuscles.

This quality is contained in the hemoglobin, the oxygen-carrier.

Gaseous combustion-products in the blood disintegrate the hemoglobin.

Since the large bowel is always filled with these waste-derivatives, and since absorption from the large bowel constantly takes place, we are prepared to understand the Pathogenic importance of Auto-Intoxication.

Food is bound to influence the progress of disease, and must be of great consequence therapeutically, is readily seen when we consider its importance during health.

Our discussion of the chemistry of foods has taught us that food affects metabolism directly, and, therefore, is capable of striking at the very foundation of physical life.

In chronic diseases which are not characterized by a distinct waste or a continuous loss of weight, oxidation is sluggish and imperfect.

The general symptoms in these conditions are caused by the retention of waste-products or, as Bouchard says by Auto-Intoxication.

The General Pack is indicated in all conditions in which depletion of the brain is desired (insomnia, inflammatory conditions of the brain, apoplexy, etc.).

As a general tonic to stimulate metabolism and increase skin-function it is unexcelled.

The cold moist pack is probably the best and most easily administered hydriatic application. Applied to the whole body it is known as the general pack (popularly called "the Spanish mantle") .

Two or three woolen blankets are spread on a bed.

Over them a sheet wrung out in cold water is placed.

The patient lies down upon this sheet and is quickly wrapt in (1) the sheet, care being taken to wrap all the extremities separately and to make the sheet fit snugly; and (2) in the woolen blankets, which are wrapt over the wet sheet.

The head of the patient is not included, a dry towel being tucked in below the chin and on both sides of the neck, to prevent the air from striking the wet sheet.

The duration of the pack depends on circumstances.

If the patient stands the pack well, it should not be removed until he has ceased to sweat and is beginning to complain of a clammy feeling.

Then the pack is removed and the patient is given a brisk cold rub-down.

The general pack is indicated in all conditions in which depletion of the brain is desired (insomnia, inflammatory conditions of the brain, apoplexy, etc.).

It is a powerful antipyretic in continued fevers.

In diphtheria and all conditions characterized by angina it is a valuable adjunct.

In internal congestions (lungs, bowels, liver), accompanied by imperfect excretion, the general pack renders signal service.

In all conditions of Auto-Intoxication it is indicated.

For tonic purposes it may be given once or twice a week, as an alterant every day, as an antipyretic several times daily, depending on the requirements of the case. The average duration of a pack is 1 hour.

Auto-Intoxication is a condition of the blood produced by the absorption or reabsorption of substances which are foreign to the physiological purposes of the organism.

It is by all odds the most prolific cause of chronic diseases, especially the so-called functional disorders.

The toxic derivatives which are the true etiological factors in the causation of many chronic diseases, may be products of the physiological digestive secretions and fluids, of normal products of digestion and of abnormal products of bacterial disintegration of normal food.

Active putrefaction in the intestinal canal, especially the colon, is produced by different forms of anerobic bacteria.

The toxic character of these derivatives has been demonstrated by the effects on some of the lower animals that were inoculated with them, e.g. rabbits and guinea-pigs.

The common symptoms produced were tetanic in character and resembled the spasms which are frequently caused by intestinal troubles in children, Injection of ammoniacal urine sometimes produced fatal results in animals.

Absorption of Toxines from the Alimentary Tract Usually Gives Rise to Nervous Phenomena, or Cutaneous Disorders.

Autointoxication is the true Etiological Factor in the majority of cases of Headache, Vertigo, Malaise, Biliousness, Nervousness, Neurasthenia, Melancholia, Hypochondriasis, the "blues", Muscular Pains, Skin-Diseases, Nervous Diseases, in fact Chronic Diseases of all kinds.

Any part of the organism might give evidence of Malnutrition, Auto-Intoxication, and resulting functional impairments.

Neuralgia

The treatment depends on the cause because Neuralgia (nerve pain) is always a symptom, never a disease. Hilton's famous definition of pain "cry of a nerve for healthy blood", is a complete and expressive exposition of the nature of neuralgia. The latter is a symptom rarely of neuritis, sometimes of pressure of a tumor, foreign body, etc., on a nerve, not infrequently of **Toxemia (Syphilis, Malaria, Rheumatism, Metallic Poisons, etc.), but most commonly of Auto-Intoxication (absorption of derivatives of normal excreta and secreta due to Dyspepsia (indigestion), Constipation, Anemia so-called and disorders of nutrition produced by grief, worry, mental strain and other psychic factors).**

In all cases of stubborn neuralgia look to the stomach and its function.

Constipation

Constipation of one kind or another represents the cause of more than half the ailments to which human flesh is heir.

The subject covers with its apparently non-committal title many diagnostic sins and therapeutic crimes.

The wielder of the ever-ready knife who disposed of his constipated patient on the operating-table and called the cause of death "Appendicitis" illustrates one phase of the surgical misinterpretation of the problem.

To make a surgical subject out of constipation, is in 9 cases out of 10 one of the queer vagaries of the modern operating room.

I am prepared to say that the physician who is able to handle successfully the manifold conditions due to, and manifestations suggestive of, Constipation, so-called, has mastered the one problem in the entire domain of clinical medicine that is worth while.

Constipation is the bane of mankind, being associated, either as a causative factor or as a concomitant symptom, with fully 75% of all disease-conditions to which human flesh is heir.

Constipation supervenes in persons whose dietetic habits are at fault.

The mechanical act of evacuation takes place at regular intervals, once or twice, or even more frequently, in 24 hours.

If not; all the effete material is excreted, some of it remains behind and eventually becomes a source of trouble either by local irritation (e. g., in many cases of alleged appendicitis), or by absorption into the general circulation, giving rise to the thousand and one manifestations of Auto-Intoxication:

1. Rheumatism
2. Neuralgia
3. Skin Disease
4. Many obscure Disorders of the Nervous, and Psychic centers
5. Melancholia
6. Hypochondriasis
7. Hysteria
8. Disturbances of Vision
9. Hearing
10. Touch
11. Feeling, and many other ill-defined conditions too numerous to mention.

Are due to self-poisoning from the stomach, bowels and the tributary organs of digestion and assimilation in these cases which for want of a better name, I have called cases of Physiological Constipation.

The original cause in these cases is Absorption of Toxines (Bacterial or Chemical), and deposition in and subsequent irritation of some point or area of lessened resistance.

Hippocrates, when he told us that a man whose Emunctories are active, could not be sick, compressed a whole encyclopedia of clinical medicine into a few words. He foreshadowed suggestively the universal pathogenetic presence and activity of Self-Poisoning (Auto-Intoxication) in chronic diseases of all kinds.

The toxines in and from the intestines are capable of doing much damage in the system and in every kind of tissue. By being retained, they are capable of lessening the vitality of the entire economy or of any part, large or small.

The place of deposit might, for instance, be a small nerve or plexus of nerves.

The long-continued deposition of State and Toxine-laden Blood in and about this nerve or plexus may cause a Congestion in the Sheath of the Nerve-Fibre, a Chronic Inflammation which may by pressure cause pain or by over-, under- or malnutrition produce exaggerated, diminished or perverted activity.

Thus we may have a dozen different manifestations of trouble, directly due to a deposition of Toxines in or near a nerve, but originally produced by the inability of the system to get rid of waste.

In the vast realm of chronic diseases the subject of Constipation occupies a commanding position on account of the countless conditions, and cases in which Constipation is the Primary Etiological Factor, giving rise to one form or another of Auto-Intoxication.

Thus, we have cases of Rheumatism, Neuralgia, Melancholia, Hysteria, Eczema and many more, too numerous to mention.

It would be interesting to determine the relation of Constipation to the production of the many conditions which interest the Alienist (Psychiatry) and neurologist. It is worth remembering that **Hot Water taken in consider able quantity is a splendid therapeutic agent in the treatment of Constipation.**

Two to 4 glasses of very hot water taken on an empty stomach is worth trying in every case, unless there is a coexisting severe gastroptosis or dilatation of the stomach. **The patient should walk after drinking the water.**

The drinking of hot water in the manner indicated is the suggestion of Boas who borrowed it from Priessnitz.

Irrigation and Manipulation of the Bowels

Flushing of the Colon is an Agent of Unquestioned Value In All Cases of Constipation. It should be practiced 2 or 3 times a week.

The water should be warm.

Beginning in the left iliac space and following the course of the descending, transverse and ascending portions of the colon, gentle Massage should be given to help in the distribution of the water and the softening of the fecal matter. Abdominal Massage is useful in many cases.

It should be given 3 times a week, always on an empty stomach.

The manipulations should be deep and in keeping with the anatomic structure of the intestinal canal.

The superficial manipulations of most masseuses are worthless, and not in frequently irritating to the skin and subcutaneous tissues.

It may not be amiss to add a few technical suggestions in connection with the subject of Massage of the stomach and intestines. The patient is placed on his back with his knees elevated and breathing through his mouth. The operator stands on the left side of the patient placing his right or left hand upon the patient‘s epigastrium or umbilical region, depending on the effect desired.

Deep but gentle pressure with the ball portion of the hand alternates with pressure of the inner surfaces, not the tips, of four fingers. At the same time the whole hand of the operator is rocked to and fro, carrying the underlying tissues with it without sliding over the skin.

The operator's hand must at all times remain in firm contact with the patient's skin and carry it along. The treatment should never be given after a meal and should never cause pain.

Applications of Light

The stimulating effect of sunlight applied to the abdomen, or, for that matter, to the whole body-surface (Helio-Therapy, Actino-Therapy, Sun-Bath) is a splendid auxiliary in the Treatment of Constipation.

In the metabolic variety of constipation it is invaluable.

The Minin light (Blue Light) can be employed as a good substitute when sunlight is unavailable or when the treatments are given in the physician's office.

Exposure of the abdomen for 30 minutes to blue light is often followed by a desire to defecate.

A physician's office which is not equipped with a Minin apparatus cannot be considered modern.

Applications of Water

The employment of the Cold Douche or Pack, on the abdomen in the morning is very useful, especially in persons whose circulation is good.

The reaction which follows the douche results in an increase of arterial blood in the abdomen, and coincidently by intensified metabolism and functional activity, not only of the skin, but of the intra-abdominal lymphatics.

The Cold Douche is the simplest, and most useful Hydriatic Application in these cases. Much harm is sometimes done by the indiscriminate use of cold water. **In patients whose circulation is sluggish, the Hot Douche or a Warm Application would be safer than the use of cold, but by no means as effective.**

The alternating hot and cold douche on the abdomen is a splendid local tonic in suitable cases.

The Use of Electricity

The employment of a faradic current is beneficial in atonic Constipation.

One electrode on the abdomen (large pad), the other electrode on the back.

Use a mild current with rapid interruptions. The constant (galvanic) current may be employed with advantage (3 to 5 milliamperes, pos. p. on abdomen, neg. p. on back, small sponge electrodes, shifting about constantly).

Dr Albert Abrams, MD recommends the use of the sinusoidal current for 15 minutes daily (one electrode over sacrum, the other over first 3 lumbar vertebrae).

Static sparks over junction of lumbar and dorsal regions are sometimes of advantage.

The static induced (Morton's wave) current applied to the abdomen is recommended by some. **The high frequency applied to the abdomen by means of vacuum-electrodes is a valuable adjunct. In many cases it is of advantage to apply the high frequency current to the lower regions of the spine.**

Mechanical Auxiliaries

The proper use of a good Oscillator enhances the effect of Massage and faradism.

The different varieties of constipation represent probably the most promising field for a good oscillator. The simplicity of technique is a point in its favor.

Vibration is more difficult of application, but a splendid therapeutic agent in the hands of a good operator.

The application should be made peripherally by deep and coarse vibration over the abdomen in the direction of the peristaltic movement.

Centrally it should be applied by deep and rapid strokes to the lower dorsal and lumbar vertebrae to stimulate the centers which control the functions of the different sections of the intestinal canal.

Vibration should be practiced every day for not less than 15 minutes.

The tremendous extent of Constipation as a cause of disease, after primarily being an effect itself, is just beginning to be understood and appreciated.

To prevent the accumulation of waste, to get rid of it after it has collected and thus keep the animal-machinery clean, is the purpose of a large portion of our therapeutic work.

Alcoholism

Together with meat, coffee and tea are undesirable for alcoholic patients.

Clear water is the best beverage for them because it is the natural cleansing and thirst-allaying agent.

Many alcoholic subjects, have lost their physical taste for water.

This is usually a bad prognostic sign, as far as a cure is concerned.

Irrigation of the Colon every other day is a good restorative method.

Much material of value in connection with the Treatment of Chronic Alcoholism is contained in the discussion under the head of Bright's disease, indigestion and Auto-Intoxication, etc.

Most of these patients are otherwise sick as a result of intemperate habits and require attention accordingly.

Hygienic environment is necessary for successful Treatment of Alcoholism.

A vegetarian diet, a chance to encourage skin-action by Sun Baths and, every 2 or 3 days, a sweat-bath.

Massage of the stomach is indicated in cases of gaseous dyspepsia.

Vibration of the dorsal spine, daily static insulation or high frequency application to the whole body by auto-condensation are very beneficial.

Otherwise the case should be handled in keeping with the requirements of the individual condition.

Cirrhosis of the Liver

The diet in the average case of this kind should be regulated.

In the initial stage of the disease much good can be done by a dry dietetic regime.

The greatest difficulty is usually the obstinacy and lack of intelligent co-operation on the part of the patient.

Under the head of valvular diseases of the heart reference is made to Oertel's dehydration method which is a subject of great importance in connection with the treatment of Cirrhosis of the Liver.

Cold Moist Packs on the abdomen, and Massage of the abdomen, and daily Irrigation of the Colon, are splendid adjuncts to the Treatment.

A large positive pad-electrode over the liver, negative to the feet and Hydro-Therapeutic applications to the lower extremities to unload the stagnant portal system, are valuable.

The patient should avoid starches and fats.

In the latter stages of the disease the treatment is purely symptomatic.

Diet, derivating water-applications to the lower extremities, Massage of the stomach, Colon-Irrigation, Sun-Baths and plenty of Fresh Air are the necessary conditions of the treatment.

Colon Irrigation

Colon Irrigation is one of the Most Important Sanitary and Therapeutic Agents in the Treatment of Most Diseases.

It is administered for the purpose of Cleaning out the Large Intestines.

In this way absorption of Toxines (Auto-Intoxication) is prevented and the nerve-supply of the abdominal organs stimulated through the solar-plexus, which is not infrequently in a semi-paralytic condition from the pressure of a distended transverse colon.

The patient is placed in the knee-chest position, shoulders down,

hips elevated. A well-greased rectal tube is now introduced up to or beyond the sigmoid flexure and warm water from a fountain syringe is allowed to flow through the rectal tube into the descending colon.

The water soon fills up the descending and transverse portions of the colon and finds its way into the ascending portion, especially if the patient turns on his back and helps in the distribution of the water by firm kneading of the abdomen. Colon-Irrigation is not usually a success the first time.

The patient may complain of griping and inability to hold much water.

With each succeeding attempt less difficulty will be experienced in getting water into the colon. The patient should persist until he is successful.

The Effect of Thorough Colon-Irrigation Must Be Experienced, in a number of cases In Order To Be Thoroughly Appreciated.

In the treatment of chronic diseases its value is positively inestimable.

One phase of a case of diabetes, if at all present, should receive prompt and continuous attention. **Constipation contribute to the general tendency to Toxemia. It must be prevented by suitable changes in the Dietetic Regime and by Irrigation of the Colon. The value of the Arc-Light Bath (Sun Lamp), cannot be overrated.**

Diarrhea

Diarrhea may be due to the presence of irritating substances in the alimentary canal, and is the effort made by nature to eliminate the offensive material. It may be due to impaired innervation of the bowels or to inflammatory conditions in the intestinal canal. Sometimes it co-exists and is directly connected with certain general diseases (Bright's Disease, Cancer, Diabetes), and represents nature's eliminative efforts.

As long as the stools are offensive, the diarrhea is salutary and should not be interfered with.

Colon Irrigation should be given for the purpose of diluting the deleterious material and facilitating its discharge.

(Milk diet normally will bring diarrhoea to an end).

There is no better way of compelling the organism to absorb the inflammatory material than by suspending the function of food-assimilation.

The 3 remaining Emunctories (skin, lungs, kidneys) assume the task of normal excretion and exercise their activity in a compensatory way.

Colon Irrigation can be used after the acute stage is over.

Locally hot applications over the abdominal wall are serviceable.

In the treatment of disease, especially chronic disease, diet occupies a commanding position.

Quantitatively Water is the most important element in the organism because it represents approximately 75% of the body.

Buttermilk is an excellent dietetic article, and will be found very useful if combined with Irrigation of the Colon every other day.

The value of Suggestive Therapy is too well established to admit of any doubt. In any and all cases elimination through the skin is of the greatest importance. **Clinically Colonic Epilepsy is a condition entirely or partly due to the irritating action of Toxines from the large intestines.**

This view of the subject explains the good effects of suitable therapeutic measures.

The appearance of Gastro-Intestinal Stasis in members of the same family makes Epilepsy frequently.

The fever represents a process of regeneration and cleansing.

This explains the subject fully.

Attention to the bowel function, preferably by Irrigation, is understood.

It is a fact worth remembering that the dietetic suggestions given above have a tendency to prevent clogging of the alimentary canal.

Rest of body and soul, and fresh air are taken for granted in the treatment of fever-cases. They sustain the mental and physical forces of the body and represent, therefore, the prophylaxis of waste.

Light (sunlight) must be admitted to the room, but it must not be permitted to disturb the rest of the patient.

Functional Disorders

Within certain physiological limitations, we recognize function as normal activity depending upon certain variable factors, such as the state of general health, the personal equation, psychic, mental and physical, and certain incidental and accidental features of the individual case.

Function is never per se accentuated beyond a certain maximum of intensity, never depressed beneath a certain minimum of power and action, never perverted from the normal character of action.

The activity of any organ is the physiological expression of power contained in the cellular elements.

Their Structural or Nutritional Integrity Determines the capacity of the organ to perform certain function or functions in a strictly physiological manner.

Thus we are prepared to say that: A **Functional Disorder is a Nutritional Disturbance.**

If the Nutrition (using the latter term in its widest physiological significance), is increased, and a Hyperemia (excess of blood in the vessels supplying an organ) of the cell-elements of the organ exists, we expect stimulation of function or increase in the manifestation of working capacity.

If nutrition is so active that the cell-elements can not appropriate or assimilate it, the result is a violent reaction characterized by all the evidences of over-nutrition and coexisting Stasis.

This condition involves exhaustion of the functional power and is known as active Congestion or Inflammation. If the cell-elements of an organ receive less than their physiological share of nutriment (Anemia) not having enough healthy red blood cells or hemoglobin to carry oxygen to the body's tissues, functional power will necessarily and proportionally be depressed.

If they receive the wrong kind of nutriment (Ischemia) an inadequate blood supply to an organ, deviations from the normal functional standard might be the result.

If the blood carries Morbid Elements of any kind, e.g. Derivatives of Germ Life or of normal Secretions or Excretions of the organism, Toxines and various Products of a Retrograde Metamorphosis, the cell-elements might give rise to Erratic Functional Manifestations.

If the affected cell-elements happen to belong to some Nerve or Nerve-Plexus it is plain to see that an infinite number and variety of manifestations might result therefrom. The closely and intricately interwoven network of the nervous system may receive an impulse or suffer an irritation at any one point; the result might be some motor or sensory disturbance in the area controlled by that particular nerve or nerve-plexus. The impulse or irritation might be transmitted by continuity of structure through interlacing sympathetic nerves and might cause symptoms or manifestations in a remote place and of an entirely different character from that of the original stimulus, impetus or irritation.

Therein lies the pathology of the so-called Reflex Disorders.

The transmission of impulses of this kind follows the direction of least resistance. Why a certain path offers less resistance than any other, and why, therefore, manifestations of a certain kind follow, it is not easy to determine.

Therein lies the difficulty of accounting for these **Reflex Disorders.**

There is no doubt, that **undue irritability of a nerve-fiber indicates a loss of resisting power or tone and is also an evidence of increase, decrease or perversion of nutrition. In making these statements we are reverting to the early days of pathology when the humoral origin of disease furnished all the logic of etiology.**

We are beginning to realize that the modern teaching concerning opsones (Opsone is an antibody whose function is to neutralize, precipitate, or dissolve morbific microbe products), and Auto-Intoxication has forcibly reproduced much of the view-point of the olden times.

The physiological meaning and significance of nutrition must be adhered to; if we desire to arrive at clear conclusions concerning the causes of all functional disorders. Nutrition of an organ is dependent upon nutrition of the trophic or Vaso-motor Nerve-mechanism of the organ.

Since the Blood is the carrier of Nutrition and, therefore, of metabolism, the study of the subject is in its last consequences the study of the blood.

The Blood is the carrier of food (of fuel), of heat, and of waste according to certain physiological laws.

The Blood, It receives food through the lungs and through the stomach.

It assumes different forms of consistency, composition and character in keeping with the activity of the different organs.

It carries the food elements to the lungs and exposes them to oxidation.

It deposits waste in the organs of excretion.

Thus, we see that the Blood is the factor upon which metabolism hinges.

If metabolism in any of its phases, or in any part of the body is disturbed, the blood is concerned primarily.

Secretions may fail in their natural function and undergo chemical changes.

Excretions and combustion-products may be retained, and again enter the circulation. All these substances are foreign to the physiological purposes of metabolism, and, therefore, are to all intents and purposes poisons.

Their presence in the body is equivalent to an Ischemia (an inadequate blood supply to an organ or part of the body), and may give rise to an endless and numberless variety of symptoms of poisoning through malnutrition (perverted nutrition) of the organism, wholly or in part.

This is what is meant by Auto-Intoxication, the most powerful, the most variable, the most neglected etiological factor in the production of disease and its symptoms.

It is the Pathology of most so-called Functional and Reflex Disorders.

The skin furnishes a good and well-fitting illustration of a functional disorder. We know that in all non-parasitic skin diseases the skin is only concerned secondarily.

Primarily there is a nutritional defect in the elements that preserve the skin.

The blood may be present in excess, causing a hyperemic or inflammatory skin-lesion. **Function is intensified, the exaggeration of functional activity of the skin leading to the pathologic condition which we recognize as a skin-disease.**

Analogously we may recognize skin-lesions due to lessened nutrition (poisoning by CO_2) and perverted nutrition (Autointoxication of various kinds).

Thus, the condition of the skin is secondary to certain aberrations in the system and represents its outward expression.

To go into detail, and describe the pathological changes in the skin is of no diagnostic value, because all these changes are secondary to the actual causative factor which precedes the disease of the skin, to wit: a disturbance of local or general metabolism. This explains the futility of local treatment in these cases and liability to recurrence.

With these principles firmly fixed in our minds, we are prepared to turn to first principles and philosophy of the Hippocratic Teaching concerning the fourfold function of excretion (Skin, Lungs, Bowel, Kidneys), as the prophylaxis of disease.

In proportion as we are able to promote, control or regulate elimination, we are able to cure disease.

This is what gives Hydro-Therapy and Thermo-Therapy their commanding place in Clinical medicine.

In all Chronic Diseases, Auto-intoxication is the one factor that must be reckoned with and must be conquered.

With these facts in our mind we are able to understand the nature of Rheumatism, the symptomatology of many diseases of women, and, above all, we are prepared to attempt the Treatment of Diseases of the Nervous System that are so universally misinterpreted and unsuccessfully handled.

We are ready to admit that Functional and Reflex Disorders have no pathological significance because they are invariably secondary to and symptomatic of some underlying disorder of nutrition.

Much of what has been stated under the head of Auto-Intoxication contains the logic of this pathology.

In keeping with what has been said, we are prepared to look upon general and local elimination as the keynote of treatment in all functional disorders.

Irrigation of the Colon Is Indispensable.

In most cases the Colon is a Stagnant sewer full of filth and infection.

Metschnikoff believes that man would live to an average age of 152 years if it were not for the fact that he carries the germs of decay and death constantly in his large intestines.

The Importance of Colon-Irrigation can not be overrated in cases of functional disorders due to ill-defined causes.

Its effect should be supplemented by general elimination through the Skin (Electric-Light Bath, theramic cylinder).

General Massage can be added.

The Diet should be non-nitrogenous in all these cases.

The patient should be taught the Hygienic Value of water-drinking.

The local treatment depends entirely on the indications presented by the individual case. Above all things try to find the source of all the trouble.

Try to understand the philosophy of Auto-Intoxication as: A Causative Factor of Disease. Study the function of the several organs that might be concerned in the production of a Toxemic State.

In the order of their relative importance as disease-producers, they are:

1. Stomach
2. Colon
3. Uterus
4. Liver
5. Kidneys

Some forms of Auto-Intoxication are familiar, like: Rheumatism and Chronic Bright's disease.

The careful and systematic study of Gastro-Intestinal Disease is indispensable in the scientific analysis and logical treatment of functional disorders, wherever they may appear.

Intestinal Auto-Intoxication, Poisoning of the Sympathetic Nerves, Intestinal Stasis; representing the last sequence of fermentation, putrefaction and visceral dilatation furnish the etiological factors of functional diseases and must be reckoned with if the effects are to be removed.

Rheumatism

The essence of the disease-process, is some disproportion in the intake of food and output of waste, using the latter term in its widest physiological sense.

The disproportion arises from the retention in the blood of waste-products of oxidation, and the formation and absorption of Toxines from the retained excreta.

Chronic Gastritis (Catarrh of the Stomach)

Attention to the bowel-function by regular Irrigation of the Colon is of Importance. The Diet must be cautiously adapted to the individual case.

Daily exposure of the epigastrium to Minin light is useful.

Cold Moist Packs are also very serviceable and can be combined with local High Frequency application.

Cold Douches to the spine, and Vibration over the splanchnic nerves are often very effective in improving the condition of the stomach.

Catarrh of the stomach, in and of itself, hardly ever exists.

It is usually a part of a symptom-complex pointing to a number of possible pathologic conditions.

Information will be found under the special heads of Gastro-Intestinal Stasis, Auto-Intoxication and related subjects.

Gastro-Intestinal Stasis

This term, pathologically speaking, has a vast range of significance.

The term “Stasis” means partially or entirely suspended activity or function.

This is the physiological meaning of the word. Applied to the gastro-intestinal canal, the term receives an anatomical significance, consequential to its pathologic meaning. **If any part of the alimentary canal, for any reason whatsoever, becomes partly or totally inactive as such, its contents do not by any means share the condition of inactivity. There is increased fermentation and putrefaction, more active bacterial vegetation and as a result increased pressure on the inner surfaces of the gut. Thus, we can readily understand the variety of anatomic and pathologic names which belong under the head of the general term "Gastrointestinal Stasis." Depression, suspension or perversion of the functions of the stomach and intestines are designated as dyspepsia, indigestion, gastric or intestinal catarrh, etc. The poisoning of the system by the toxic substances in the stomach or bowels are known as Auto-Intoxication, Gastric and Intestinal Toxemia, ptomaine-poisoning, etc. The result of the increased intra-tubular pressure is a gastrectasia, eneroclasis, gastric or intestinal dilatation. All these varying conditions, with their never-ending symptomatology, can properly be classified under the head of Gastro-Intestinal Stasis.** The extent of the diseased condition and the semeiologic significance of one or the other subjective or objective symptom belong to the individual case.

For our purpose it suffices to divide the subject anatomically, to wit:

Gastric Stasis (dyspepsia, gastric indigestion, acute and chronic), and **Intestinal Stasis, including the many functional afflictions of the bowels and the anatomic changes which frequently follow these disorders. Functional disturbances of the stomach represent the classic type of chronic disease. Among the chronic cases that go from one doctor to another, without getting much relief, the various forms of apparent or disguised stomach trouble represent by far the largest percentage.** It is especially the disguised forms of gastric disorder that are very much in evidence without their presence even being suspected. **The stomach is the dog in the manger.**

Many a patient who is being treated for:

1. **Nervousness**
2. **Hysteria**
3. **Neurasthenia**
4. **Hypochondriasis**
5. **Insomnia**
6. **Headache**
7. **Muscular Rheumatism**
8. **Neuralgia**
9. **Imperfections of Sight**
10. **Vertigo**
11. **Heart-trouble**
12. **Eczema; and many other forms of Skin Disease, is a Dyspeptic.**

And can not get well because the Dyspeptic condition remains unsuspected, unattended and unimproved.

Physiological therapy has taught us to go back to the cause, the actual and primary reason for any existing condition.

The term "Dyspepsia" expresses difficulty in the performance of gastric digestion.

Inasmuch as gastric digestion is a most important phase in the process of nutrition (anabolism), it is directly related to the well-being of the whole organism and all its parts. If gastric digestion is disturbed, the functional activity of the intestinal canal, is usually impaired at the same time.

In other words, gastric indigestion does not usually exist without some impairment of Intestinal Digestion.

That the existence of Dyspepsia should manifest itself in a thousand different ways, is not surprising.

Any part of the organism might give evidence of malnutrition, Auto-Intoxication, and resulting functional impairments.

The effects of Dyspepsia might manifest themselves at some point of least resistance, and might be modified by the peculiarities and idiosyncrasies of the individual organism.

Thus we can explain the kaleidoscopic variety of symptoms that the individual case might present.

These symptoms might be suggestive of stomach-trouble (by directing the attention of the medical attendant to the stomach), or misleading (by appearing in some part or structure apparently in no connection with the stomach, e.g. in cases of Toxic Sciatica, and numerous Neuroses).

Remember that in cases of chronic rheumatism, neuralgia and neuroses, skin diseases, and in the endless chain of disorders of the liver and bowels, you can always win half the battle, and frequently the whole of it if you know how to handle the stomach.

The symptomatology of dyspepsia is unlimited because the stomach is the most important organ of nutrition.

Impairment of its function may mean malnutrition of the whole organism or of some special part or region.

Through the Nervous System, especially the Vaso-motors, the gastric trouble may be reflected to some distant part, apparently in no way connected with the actual cause of the trouble.

Through the pneumogastric and phrenic nerves, the diseased stomach may cause symptoms on the part of the diaphragm, the Heart and the Respiratory Apparatus.

Continued pressure of a dilated stomach posteriorly may cause inhibition of the function of the numerous nerves that form the closely communicating and vastly ramifying network of the solar plexus and the 10 smaller plexus that spring from it.

> *"The semi-lunar ganglia are two small reddish masses, placed upon the crura of the diaphragm, close beside the coeliac artery. These are in the first place connected at their upper and outer borders with the great splanchnic nerves, which may be said to terminate in them — the point of junction being readily perceived by a marked difference of colour. The ganglia are connected by a transverse mass of similar structure, or are so close as to appear united at the lower surface of the coeliac artery. The upper border of each ganglion is concave, the lower convex; hence their name "semi-lunar". But the two bodies so named, and in which the great splanchnic nerves terminate, form only a part of the nervous structure placed in this situation.* ***The anterior border of each will be found connected with 8 or 10 smaller masses of a structure similar to themselves, which rest upon the crura of the diaphragm and the aorta, each being connected to the other by slips and by filaments, so as to enclose spaces. Now, to this aggregate of these islets of nervous substance the term solar plexus is applied, from which, as from a common centre of radiation, proceed filaments, accompanying the different arteries which spring from the aorta, constituting as many secondary plexus as there are organs to be supplied."*** *- in "The elements of Anatomy", 1837.*

In this way the structure and function of all the abdominal viscera may be more or less seriously impaired. Constipation is usually present.

There is no end to the chain of Reflex Symptoms, that are liable to be produced by a dilated stomach, and may deceive the physician in regard to the true nature of his patient's ailment. The treatment of an attack of dyspepsia is plainly indicated by the condition of the stomach locally and of the patient generally. The first rule of action is to wash out the stomach, thus removing whatever offensive material there might be left in the stomach.

Irrigate the Colon thoroughly and repeatedly.

The drinking of large quantities of hot water is indicated in the vast majority of cases. A hot application (e. g. Minin light) to the epigastrium is indicated.

After an interval of 12 to 24 hours an abatement in the acute symptoms can be expected unless an inflammation of the mucous membrane of the stomach has aggravated the symptoms and changed a simple dyspepsia into a more or less complicated gastritis. The diet of an acute dyspepsia in a patient with some common sense is an easy problem. For 24 hours the patient should take no nourishment of any kind. If the tongue is badly coated, the breath offensive and there is no desire for food, let the patient do without food for 36 hours and longer.

Let him drink hot water and keep small pieces of ice in his mouth.

After 1 day or 2 let him drink small quantities of buttermilk.

Starvation is the proper scientific treatment of these cases after the stomach and bowels have been thoroughly cleaned out.

After the acute stage is over, the treatment of the case is simple and should be controlled by the rules of common sense.

The form of gastric stasis which is not so simple and frequently taxes the resourcefulness of the physician to the utmost, is the so-called "chronic dyspepsia" or a more or less well marked condition of gastric dilatation (gastrectasis).

It seems improper to separate this disease from any disturbance and lesion in the intestines.

In these old chronic cases the stomach and the bowels are usually together afflicted.

This fact makes the diagnosis as well as the treatment difficult and uncertain.

Many cases of intestinal indigestion have a distinctly surgical aspect.

The multiplicity of clinical pictures presented by cases of dilated bowels, pouches, pockets, diverticular expansions, not to speak of bands of adhesions binding sections of the bowels together, frequently causing twisting, occlusion and strangulation, has of late years been elaborated by Arbuthnot Lane and others.

Etiologically they all belong under the same head.

Voluntary and unconscious neglect of the bowel-function, together with dietetic errors and bad habits of eating, is the responsible original cause.

I beg to refer the reader to what I have said elsewhere in this book on the subject of Constipation and Auto-Intoxication.

The one important conclusion to be drawn from the mass of material that encumbers this subject is that all these conditions emanate from one cause, and are to all intents and purposes preventable.

Ignorance of the purpose and importance of Intestinal Excretion is to blame in many cases.

Neglect of this function, oft-times unavoidable, is a frequent cause.

The many mortal sins and crimes against hygiene and dietetics under the apologetic cover of modern civilization, are the prolific cause in not a few instances.

The prophylaxis consists in teaching people to live sanely, to chew thoroughly, to regulate the bowel function, to avoid the dangers of meat-eating, to eat enough but not too much, to drink moderately, etc., to eat in order to live, but not vice versa, to be sane in all things.

The first therapeutic law in the treatment of all these cases is definite and rational instruction on hygiene and dietetics.

The general aspect of these cases is suggestively similar.

Look to the gastro-intestinal canal if your patient tells you that he is not feeling well, but cannot point to any special part of the body as being the possible seat of his trouble. If he complains of a lack of energy, mental and physical, and has a coated tongue, if he is a strong meat-eater and constipated besides, if his abdomen is painful in spots upon deep pressure, the evidence is almost conclusive. Let him lie down with the knees drawn up and the diaphragm relaxed (mouth open).

If palpation of the epigastrium causes distress or discomfort, or if you can cause the stomach to give evidence of the presence of gas and water (gurgling, splashing, succussion), the diagnosis is complete.

An examination of this kind should be made on an empty stomach.

The one characteristic feature of Gastro-Intestinal Stasis is its Endless Symptomatology

It is necessarily misleading and often makes the task of arriving at a diagnosis an unsatisfactory procedure.

If the symptoms point to the stomach or bowels, the diagnosis is comparatively easy. If they do not, the evidence in the case must be sought for elsewhere.

In many cases the skin is dry and sallow, and the seat of chronic skin-afflictions.

1. **Pruritus is common, sometimes general, although frequently confined to special areas.**
2. **Muscular pains suggestive of Rheumatism, especially in the extremities and in the back, are often suggestive of the Auto-Intoxication characteristic of these cases.**
3. **Vertigo is a frequent symptom.**
4. **Mental symptoms, are found in many patients.**
5. **Depression**
6. **Melancholia**
7. **Violent Temper**
8. **Prolonged Hysterical Attacks**
9. **Hypochondriasis**
10. **High-pitched emotional moods**
11. **Defective memory, characterize some of these cases.**
12. **Headache is a common symptom.**

Some of these patients are nervous and excitable and do not sleep well.

The appetite is moody, although patients with constant longing for food, especially proteid, are not rare. A desire for stimulants, is often observed.

The list of symptoms is endless.

The laboratory method of diagnosis, test-meals, etc., are of theoretic interest but have very little clinical value.

The intercurrence of acute symptoms is sometimes noted.

Attacks resembling:

1. **Apoplexy**
2. **Epilepsy**
3. **Sudden Collapse**
4. **Long-continued Coma may occur.**

There is hardly a Neurosis, or a Neurologic symptom which may not be associated with such a case.

Fortunately these severe cases are exceptional, although we must not forget that the possibility of very severe symptoms is contained in every case of chronic dyspepsia, as I have observed in many instances.

The question of treatment opens up one of the most varied chapters in clinical medicine.

Hygienic Considerations

The importance of fresh air, sunlight and exercise cannot be repeated too frequently nor emphasized too strongly.

The question of sane living is the first subject to be discussed with the patient.

Suitable work, not fatiguing and nerve-racking, should be found for the patient.

At least 8 hours of sleep to be preceded by a sponge-bath must be insisted upon.

Recreation, play and rest in the open air are very essential. Exercise is of great value, preferably mountain-climbing, horse-back riding and swimming.

In many, even advanced cases, this regime means cure of the disease and prophylaxis of recurrence the disease and prophylaxis of recurrence.

Dietetic Questions

How to feed the dyspeptic patient is a question which is much more easily asked than answered. Individualization is the indispensable mode of procedure.

First find out what the patient eats, how much, when, how much in 24 hours. Ascertain whether he eats slowly and chews thoroughly. Look at his Teeth.

After this preliminary examination begin by excluding the unnecessary encumbrances of his diet.

Tobacco is often injurious, alcohol is never beneficial in these cases.

Direct the patient to practice Irrigation of the Colon, every other day.

Colon Irrigation

Colon-Irrigation is not usually a success the first time.

The patient may complain of griping and inability to hold much water.

With each succeeding attempt less difficulty will be experienced in getting water into the colon.

The patient should persist until he is successful.

The Benefits of Colon Irrigation Must Be Experienced To Be Appreciated.

The question of feeding the patient must be dependent on the patient's desire for food. If the patient has no appetite, do not feed him until there is a distinct desire for food. If the patient has a good appetite, curb it by eliminating proteid food as much as possible. Its digestion involves more effort than the digestion of carbohydrates. It is a well-known fact that the putrefactive germs thrive particularly in the presence of proteids. I believe that therapeutic underfeeding should be the keynote of dietetic treatment.

Extremes of temperature of food-stuffs must be avoided.

Ice-cold and very hot articles of food are not to be used.

Water or any fluid in excess is objectionable because it dilutes the digestive juices and, by its weight, has a tendency to drag the stomach out of its position.

Food in bulk is objectionable because it aggravates the dilatation and stasis of the stomach and bowel.

In the average case it is safe to begin the dietetic management with water, butter-milk, thin soup or broth, bread, stale or toasted, or barley-water.

Experiment with fruit and vegetables, raw or cooked, until you have found the proper selection and quantity for the individual case.

Rice, peas, beans, lentils, kale, carrots, spinach, beets, cabbage, corn, cauliflower, etc., offer a tempting variety.

Fruit is very desirable and hardly ever disagrees.

Meat must be excluded during the duration of the dietetic regime.

I have made the exclusion of meat an iron-bound rule in all these cases and have never regretted it. Mistakes are more easily made in giving meat than any other variety of food, the results of laboratory-tests notwithstanding.

To relieve the discomfort, and pain of dyspepsia (indigestion), heat is the least harmful and most effective agent, hot water in the stomach and a hot application on the epigastrium.

The Colon might Have To Be Irrigated.

Mechanical Therapy

In the application of physical therapeutic methods the laboratory aspect of gastrology and enterology is of little practical importance.

We look upon the weakened or perverted function as being dependent on the changes in the gastric and intestinal wall.

It makes no practical difference in the eradication of the cause whether there is hyperacidity, absence of ferments or any other sub-variety of gastric indigestion.

All these conditions are results, not causes nor pathological states per se.

There is absence of tone in the walls of the stomach, due to changes in the nutrition (circulation) in the walls or exhaustion of the nerve-supply of the stomach, resulting in a weak condition and flabby state of the muscular coat.

The varieties of dyspepsia are results thereof.

This is the clinical meaning of dyspepsia.

If the condition continues for a long time, it produces atrophy of the muscular coat, venous hyperemia of the mucosa and proliferation of connective tissue.

The stomach becomes baggy, flabby, atonic.

It loses the power of expelling the gaseous products of fermentation. Thus the stomach becomes dilated.

For this reason we look upon some degree of dilatation of the stomach as being associated with and necessarily consequent upon all forms of chronic dyspepsia.

An excellent mechanical support is an abdominal bandage properly applied.

It should press upon the abdomen from below upward, pressing upon the stomach upward and inward.

It is of great service in cases which are being treated by Abdominal Massage.

The latter should or can be given every other day from 10 to 15 minutes.

The immediate effect of this kind of manipulation of the stomach is the production of active hyperemia.

The epigastrium is warmed up, the blood-supply of the stomach and the continuous structures are changed by the afflux of fresh arterial blood, and the consequent depletion of the veins, the absorbent glands are stimulated, the walls of the stomach and transverse colon eventually make a faint effort at peristalsis.

The Solar Plexus, which presides over the assimilative functions of the abdominal organs "the abdominal brain", receives a powerful impetus which reverberates throughout the sympathetic nervous system and stimulates metabolism in all parts of the organism.

Gradually the contractile and digestive efforts which the stomach makes become more energetic.

The pressure symptoms are temporarily relieved by the first treatment.

In rare cases this does not occur.

The prognosis then is accordingly less favourable.

The Technique of Massage of this kind is described under the head of Constipation elsewhere in this book.

The vibrator is a valuable mechano-therapeutic device in the treatment of these cases. Deep vibration over the epigastrium to stimulate the nerve-supply of the stomach should be given.

Gentle, Rapid Vibration along the course of the phrenic (side of neck to epigastrium) is very effective in helping the stomach to expel the gas.

Deep Vibration along the 4th to the 8th dorsal vertebrae frequently has an excellent effect.

Vibration over the dorsal vertebrae stimulates the intestines (3rd to 12th vert. for the stomach, 4th to 5th pylorus, 1st to 10th the small intestines, 9th to 10th peristalsis).

Electro-Therapeutic Applications

A weak, faradic current (rapid interruptions) should be allowed to pass through the stomach with one pole in the pit of the stomach, the other pole on the back.

Polarity is indifferent.

Sometimes the operator grasps one sponge- electrode with the unengaged hand and allows the current to pass while Massage is being given, the patient's hand holding the other electrode. **Faradization of the vagus is excellent.**

A galvanic application is often useful (negative pole in the pit of the stomach, positive pole on the back).

An indirect negative static breeze is beneficial, if applied to the stomach in atonic cases. Some cases do well under a high-frequency current, applied to the epigastrium by means of a suitable glass electrode.

No Electro-Therapeutic application should last longer than 10 minutes, nor be given oftener than once every other day.

If there are any particular sections of the bowel that seems to be dilated, applications should be made accordingly.

Let it be remembered that Gastro-Intestinal Stasis includes the greatest number of chronic diseases, representing all degrees of severity and the greatest variety and variability of symptoms.

If the condition is complicated with other serious illness, e. g. Bright's disease, the prognosis is correspondingly less promising.

There is no doubt that the surgical phase of the question, in the severe forms of Intestinal Stasis, has been exploited in keeping with the tendency of these days which is in the direction of surgical overwork.

While there is no doubt that surgical interference is entirely proper in the severe types in which the structural changes imperil life itself, there is otherwise no question that the strictly scientific employment of the physical therapeutic methods represents a happy medium between heroic surgical measures on the one hand and the useless employment of internal medication on the other.

Gonorrhea (Specific Urethritis, Clap)

Gonorrhea is an inflammation of a mucous membrane, usually of the urethra or the vagina, produced by contact with a microorganism which is recognized as its specific cause, namely the gonococcus of Neisser.

The affliction is so common that familiarity with its variable symptomatology can be taken for granted.

Its protean phases and many unexpected complications not infrequently make it one of the most stubborn and at the same time dangerous of venereal afflictions.

In its typical form it represents a self-limited disease with a well-marked tendency toward recovery. Colon Irrigation, Hot Sitz-Baths, and general elimination through the skin are indicated throughout the course of the disease.

After the acute stage the high-frequency current and mild vibration may be used over the pubes and perineum to stimulate healthy local reaction.

In Chronic Gonorrhea positive electrolysis (very mild) by means of a sound or high-frequency applications by means of a urethral vacuum electrode has been found serviceable.

Haemorrhoids

Irrigation of the Colon carefully performed is valuable.

Hysteria

The Treatment of a case of hysteria must begin with the treatment, and Removal of the Irritating Factor, if such is possible.

In addition thereto the patient must by suggestion be taught to obey and mechanically follow the directions given.

Irrigation of the Colon and a mild non-irritating Diet must be insisted upon in the majority of instances.

Inflammation (Chronic)

The natural termination of an inflammation is absorption.

If the inflammatory process has been caused by or has been associated with Infection or Sepsis of any kind, the result would be suppuration.

If there is molecular or en masse destruction and death of tissue, gangrene or sloughing would be the result.

There is a fourth possibility: If, for some reason or another, an acute inflammation has not terminated in absorption, suppuration or sloughing, but continues in a mild degree, the condition is called chronic inflammation.

It is characterized by passive congestion, thickening or hardening of the tissues and a liability to acute exacerbations.

Eventually changes occur in the structure of the tissue, owing to the altered condition of nutrition.

Chronic inflammation or catarrh may gradually give rise to:

Atrophy, Hypertrophy, Degeneration of diverse kinds, Hyperplasia, Ulceration, Cicatrization, Exudation, Suppuration, and may be associated with any number of intercurrent affections.

While, clinically, the division of chronic inflammations into accessible and inaccessible conditions may be accepted on the plea of convenience, we must realize that, physiologically and therapeutically, the element of accessibility does not figure at all.

In all chronic inflammations, no matter where located or how firmly established, it is possible to control, alter, increase or decrease the circulation in and near the affected region.

The method which enables us to accomplish these results is Hydro-Therapy.

The possibilities of water-applications are well-nigh unlimited.

In all cases of chronic inflammations or catarrhal conditions, irrespective of their location, duration, extent or severity, Elimination through the Skin should be the beginning of all Rational Therapy.

A local circulatory disturbance cannot exist for any length of time without involving the system generally.

Sluggish circulation in the affected part disturbs the local metabolism.

Retained Waste, Effete Matter and combustion-products gradually are absorbed from the chronically congested area, into the general system, giving rise to the thousand and one possible forms of Auto-Intoxication in variable degrees of severity.

Thus we get the typical picture of a chronic ailment, local in its pathology but constitutional in its symptomatic expressions.

Not infrequently the general symptoms detract from the local disturbance.

Through the Sympathetic Nervous System whose Fibers and Ganglia are irritated by absorbed toxic material, an unending variety of symptoms might be produced. Chronic inflammatory conditions of the gastric, intestinal or bronchial mucous membrane, of the pelvic cellular tissue, of the Schneiderian and pharyngeal membranes, of the ovarian tissues, of the connective and fibrous tissue in the muscles of the back are in this way responsible for any number or variety of Toxic Symptoms, called Reflex Symptoms.

The term "Reflex Symptom" covers a multitude of diagnostic inaccuracies.

Reflex Symptoms:

1. **Headache**
2. **Neuralgia**
3. **Vertigo**
4. **Palpitation of the Heart**
5. **Malaise**
6. **Irritability**
7. **Etc...**

Are usually evidences of Auto-Intoxication and require General Eliminative Treatment.

This is most emphatically proper in cases where an acquired or inherited vicious condition of the system prevails.

In all chronic conditions the first step in the treatment should be to open the avenues of excretion.

Colon Irrigation should be practiced 2 or 3 times a week.

The skin should be kept active by general packs, dry-heat baths, vapor-baths, etc. On general principles it might be stated that in most chronic conditions excretion is sluggish and reaction imperfect.

Therefore, the hot applications (dry-heat cylinder, vapor-bath) are preferable to the more exacting cold moist packs.

The latter are to be substituted after the system has become habituated to active metabolism.

General Massage should be added to all general treatments outlined above.

Dietetic directions should be given in keeping with the physiological requirements of the individual case. **The idiosyncrasies of the patient and individuality of the patient's stomach should be considered.**

Fresh water is always proper.

In all cases the Necessity of Air, Light and Exercise must be remembered, and embodied in the directions given in the individual case.

In Rousing the Tissues out of their lethargy, in Toning up general, and local Innervation, and in Stimulating Metabolism, and Nutrition locally and systemically, many Electro-Therapeutic Applications Are of Great Value, depending on the character of the case and the temperament of the person.

General Faradization is proper in cases of Muscular Asthenia.

General Galvanization answers well in cases of Sluggish Lymph Circulation, and inactive skin. Either current can be administered by means of a water-bath which carries one pole while the other pole is applied to some portion of the patient's skin (out of the water).

Static applications are useful (potential alternation, insulation).

General High-Frequency applications are capable of producing good effects on nutrition.

To improve the tone of the vegetative functions of the organism, vibratory stimulation (mild rapid strokes, 3 to 5 minutes daily) along the 6th to the 12th dorsal vertebrae on either side of the median line should be practiced.

Manual Manipulations should be given with the patient lying on the right, patient's left arm raised up, his hand resting on left side of his head.

The operator should stand on the side of the table toward which the patient's face is directed, pass his left hand over the patient's shoulder, his right hand over lower ribs of patient, until his fingers rest on the left side of the spine between the 6th and 12th dorsal vertebrae.

With his finger firmly placed on the line described, the muscles of the spine should be drawn upward, downward and outward successively by regular movements of the operator's hands. Let the patient turn over on his left side with his right arm, operator facing the patient for treatment of the muscles on the right side of the median line. This mode of manipulation is an excellent stimulant for the general metabolic functions through the splanchnic nerves and may be followed by vibration, as indicated above. The therapeutic directions given comprise the general treatment of chronic inflammatory or catarrhal states.

They should be applied singly or in combination, with due regard to the peculiarities of the individual patient.

The object of general treatment is to improve the system at large and incidentally remove the evidences of Auto-Intoxication (Reflex Symptoms).

General Treatment is indicated in all chronic catarrhal conditions.

If the seat of the trouble is directly accessible, e.g., in many diseases of women, the local treatment is equally important.

All Cancer cases should be given the benefit of invigorating general treatment (Static Electricity to Improve the Nervous System, Dry-Heat Cylinder to Promote Excretion, Colon-Irrigation to Improve the Bowel-Function).

Internal Secretions

The study of the internal secretions, and of the biology of the ductless glands represents an interesting and clinically valuable part.

It seems right and proper to include a cursory review of this subject in a book which is devoted to the discussion of physiologic therapeutic methods, the incomplete and fragmentary character of the therapy of the internal secretions notwithstanding.

Many interesting facts, experimental as well as therapeutic or clinical, have been ascertained by the study of many of those organs which are, even at the present time, but imperfectly understood at best and contain what might be designated as the physiology of the future.

The organs thus referred to are: Adrenal Glands, Thyroid, Pituitary body, and other parts of the Brain, etc.

The close relationship existing between these ill-understood organs and the process of phagocytosis gives the subject special significance in connection with physical or physiologic therapy.

A few of the facts ascertained by experimental and clinical study pertain to the function of the Adrenal Glands.

The Adrenal Glands supply a secretion which passes to the lungs, and takes up atmospheric Oxygen.

This Adrenal secretion constitutes the hemoglobin of the blood, and in one form or other, is present in all the tissues of the body, being really the life sustaining element of all cellular bodies.

The Thyroid gland (according to Sajous), excites the adrenal center, and in this way stimulates the adrenal function, mentioned above.

The Thyroid gland is supposed to be the source of the opsonin of the blood by which bacteria are made vulnerable to the attacks of the phagocytes or the white cells of the blood or lymph which act as scavengers, and by fighting the invading bacteria, represent the immunizing element of the body (Metschnikoff, Wright).

The Leucocytes are also the means of converting food-products, disease-germs, broken down cells, etc., into tissue-cells. The composite substance which the organs of the body manufacture, and by means of which the health of the body is sustained, has been described under the name of "Auto-Antitoxin."

It represents in the concrete what "vis medicatrix naturae" means in the abstract. The "Pituitary Body", an organ situated at the upper end of the spinal column in the so-called "sella turcica" has in recent years received much attention.

Just as the leucocytes represent the soldiers who fight the invading army of bacteria, the victorious weapons being the opsonins of the blood, so the pituitary body plays the part of the watch-dog that scents the presence and approach of the enemy.

The Pituitary Body represents the brain of the vegetative system "somatic brain".

By means of special nerve-paths (sympathetic nerves) it causes the adrenals to become more active, and to produce the "Auto-Antitoxin" by which the body sustains itself against the destructive activity of the bacterial invaders.

The Auto-Antitoxin is a composite substance representing the oxygenizing power of the adrenals, the phosphorus-laden derivative produced by the leucocytes by which heat-energy is generated, a pancreatic ferment called trypsin which is distinctly phagocytic in character, and the anti-toxin thyroid derivative.

This kind of physiologic research promises to add much to our knowledge of the machinery of the organism, if not to our therapeutic resources in the treatment of disease.

The subject should be included in the study of strictly rational methods of therapy. The material elsewhere presented under the head of opsonic therapy, is very closely identified with the study of the internal secretions or the function of the ductless glands.

Irrigation of the Colon is probably the most effective method of preventing accumulation of fecal matter in the intestines and possible Auto-Intoxication.

The Treatment in all cases of Malaria are: Carbo-hydrate (Vegetarian) Diet, Irrigation of the Colon, Sweat-Bath every 2 or 3 days, as much Sunlight and Fresh Air as possible. The Liver must be kept active.

Sluggishness of the whole system is usually coincident with and produced by sluggishness in the portal circulation.

To counteract stagnation of this kind, give Abdominal Massage, vibration over the stomach, and liver and advise horseback exercise.

Keep the blood fresh, metabolism active, elimination perfect, and the malarial state in its many forms will cease to exist (malaria, remittent fever, intermittent fever, biliousness, malarial cachexia, typhomalarial fever, etc.).

Immunity against malaria consists in a perfect physiological equilibrium of metabolism.

Nutritional Reconstruction

It is reasonable to assume that no treatment will be of any avail which does not provide a chance for proper nutrition.

The system must be given an opportunity to rid itself of all toxic material that might result from imperfect function of the skin, the lungs, the kidneys, and the bowels.

The process of elimination must be carefully watched and regulated.

The skin requires sunlight and occasional sweat-baths, enhanced by gentle Massage or high frequency currents, to encourage cutaneous excretion.

The lungs need fresh air, full of oxygen, to enable the system to eliminate the residual carbon dioxide.

The kidneys should be properly stimulated (drinking clear water), but not irritated (abuse of alcohol, etc.).

The bowels should be kept physiologically clean (Colon-Irrigation, abstinence from proteid food).

Attention to the Emunctories is the first condition of treatment in most cases of Neurasthenia. After establishing a condition of relative physiologic cleanliness, it is necessary to provide for the proper amount of activity, to keep the machine in proper running order. Active and passive movements, exercise of various kinds, walking, climbing, horse-back riding, swimming, etc., will meet the requirements of varying conditions.

This is the purpose of physiologic exercise, **made more effective by a variety of Hydro-Therapeutic procedures, e.g., Cold Douches applied to the spine.**

The walking in wet grass (Sebastian Kneipp), is one of the most powerful reactive and reconstructive applications that could be employed.

It is of great service in the large number of Neurasthenics whose greatest joy in life seems to be to haunt the offices of physicians and subject themselves to new and unusual modes of treatment.

The condition of the patient's Mind must be co-ordinated to the purpose of treatment.

Try to produce a Healthy Mental Atmosphere by removing all possible causes of irritation of the mind or of the imagination.

This involves the application of powerful and systematic suggestion which must be practiced in accordance with the patient's mental receptiveness, his or her educational, temperamental or emotional characteristics.

In view of what has been said, we are prepared to look upon Rheumatism in all its forms as being due to accumulation in, and absorption into, the system of waste products.

It is a common affliction of meat-eaters because of the inability of the organism to excrete the uric acid which is in excess.

It frequently attacks persons whose circulation is poor.

Stagnation of the intestinal excreta may produce it, as shown by the beneficial results of active catharsis in these cases.

Colon Irrigation in Rheumatism, it has a curative effect, there is no doubt.

Gastric and Intestinal Disturbances

The ordinary afflictions of the stomach and bowels that may occur in cases of Tuberculosis, are met in the manner in which these conditions are usually handled. The question of Diet is of the greatest importance, and should be given careful attention in keeping with the demands of the individual case.

Drinking large quantities of Hot Water does much good in many cases and restores a deranged stomach.

Irrigation of the Rectum and Colon is always proper to relieve Constipation and not infrequently Diarrhea.

Exposure of the Abdomen to the Minin Light is very serviceable.

Mechano-therapeutic, and Hydro-Therapeutic means of Treatment must be adapted to the requirements of the individual case.

Appendicitis

Appendicitis is one of the many diseased conditions that are a part or follow in the wake of Gastrointestinal Stasis. Neglect of the bowel-function primarily and accumulation of toxic material near the ileo-caecal valve secondarily are the causes of appendicitis in the vast number of cases.

The prophylaxis of Appendicitis is contained in what has been stated elsewhere in this book under the head of Gastro-Intestinal Stasis and Constipation.

A vegetarian regime (special: ideal orange juice only for 5 days), and Irrigation of the Colon must be enforced in all cases of irritation in or near the blind gut. Water and buttermilk can be allowed in liberal quantities.

People who lead the simple life are not usually sufferers from an inflamed appendix.

If the case is acute and the right iliac fossa shows all the signs of inflammation, the first and most important rule to be enforced is the local application of heat (poultice, hot pack, Minin light, or any other form of heat).

Stop feeding the patient and clean out the bowel thoroughly.

The regime which is now to be followed is contained in what has been said in this book on Fever and Inflammation.

Above all things do not overfeed your patient.

It is a most hazardous pitfall and is an effective means of adding fuel to the fire.

If, as will happen occasionally, the patient continues to grow worse locally and generally, the case might become a surgical problem from the development or presence of pus.

In the subacute or chronic form of Appendicitis, Elimination must be enforced systematically.

Irrigate the Colon regularly, and compel the patient for weeks to live on the plainest and simplest liquid or semi-solid vegetarian food.

Elimination through the skin (any kind of sweat-bath) is desirable.

Locally gentle Massage and vibration are permissible.

The patient should be taught to keep his bowels physiologically clean.

Outdoor exercise of all kinds is serviceable. Applications of the High-Frequency Current to the right iliac fossa are very useful.

Negative static spray is preferred by some.

Vibration over the dorsal spine is of advantage in promoting peristalsis.

Fever

The febrile state of a consumptive demands Fresh Air and absolute Rest.

Wrapping the patient in a sheet which has been wrung out in luke-warm water and rubbing the patient vigorously through the sheet, may be of benefit.

The patient must be rubbed dry quickly and allowed to rest. This application can be given once a day. Some times the effect is better if a cold moist pack is given, followed by a dry rub. **Look for a possible removable cause of fever (Pus, Auto-Intoxication).**

Uremia

The Special Therapy consists in Active Elimination: Hot Bath, Dry Heat, Hot Packs, Colon Irrigation.

Paralysis

Paralysis is a symptom of some productive and underlying cause and indicates impairment, perversion or loss of motion.

The cause may be disease of nerve-tissue, inflammation of nerve-sheaths, hemorrhage and subsequent pressure of a blood-clot, tumors, etc...

It may be a hemiplegia, if it involves a lateral half of the body; a paraplegia, if it involves the body from the waist down; a monoplegia, if it involves a single member. **Not all paralyses are effects of structural lesions.**

Hysterical paralyses are not infrequent. **Sometimes paralyses are evidences of Auto-Intoxication and disappear when the cause ceases to act.**

Some forms of Paralyses are Toxemic in character (e. g. the post-diphtheritic variety).

At times paralysis appears as the symptom of a gradually supervening or progressive deterioration of the nervous system.

On general principles we may consider the curability of the paralytic state in direct proportion to the tractability of the underlying condition.

In keeping with the anatomical site of the lesion, paralyses are said to be of encephalic, spinal or peripheral origin.

The pathogeny of paralysis is suggested by the clinical history of the disease that originally gave rise to the paralytic state.

Therein likewise lies the diagnostic element and also the prognosis or relative curability of the disease as well as of the ensuing paralysis.

If the central lesion is in the nature of a complete destruction of normal tissue, the peripheral result will be correspondingly serious as far as the involved tissues or regions are concerned.

The possibilities of Physio-Therapeutic offer many chances which the ever-ready medicine bottle knows nothing of.

Hydro-Therapy, as Winternitz assures us, often retards and sometimes prevents degeneration of central tissue.

If a paralytic condition is due to Auto-Intoxication, Toxemia, or some systemic (blood) disease, it is of vital importance to correct the Hygienic surroundings, to adapt the Dietetic habits to existing conditions and to regenerate the nutritional state by promoting and correcting metabolism.

Stimulate oxidation by Fresh Air and Sunlight.

Feed the patient on an excess of tissue-consumers (vegetable diet), unless there is a slow and gradual loss of weight which would have to be met by a supporting nitrogenous diet. **Keep the kidneys active by liberal potions of fresh water. Irrigate the Colon everyday or every other day.**

The general Electric-Light Bath should be used every 3 or 4 days.

General Massage, static insulation, the galvanic or faradic water-bath, the wave-current to the spine, the auto-condensation couch may be added for their powerful tonic effects.

We are in the habit of associating the Treatment of Paralysis with Electro-Therapy. Among the various Therapeutic Agents that are used to restore the functional power of muscles, the most available one is undoubtedly Massage.

The afflicted parts should be manipulated by effleurage, petrissage, friction, tapotement, successively and conjointly.

Thermic stimuli (local electric-light bath), Mininlight, hot applications, alternate hot and cold douches are useful to improve local nutrition.

The Electric (faradic or galvanic) water-bath can be employed if an arm or a leg is to be treated. **Vibration over the affected region is a valuable adjunct.**

Static sprays and, in suitable cases, sparks may be given locally.

The Electric Massage-roller answers nicely in some cases.

Thus we see that the Therapy of Paralysis is by no means limited to the more or less questionable use of the faradic current.

Manipulation and Vibration of the spine (Spondylo-Therapy) is of greatest importance in the treatment of paralytic cases.

It is serviceable to adhere to the following directions in adapting the local treatment of the spine to the peripheral effects to be produced.

The impulse of Manipulation and Vibration around and over the first cervical vertebrae is communicated to and received by the recti laterales, rectus capitis, anticus, posticus, sterno-hyoid, sterno-thyroid.

The 2nd and 3rd cervical correspond to sterno-mastoid, trapezius, scaleni, omohyoid, diaphragm.

The 4th cervical: diaphragm, deltoid, biceps, coraco-brachialis, supinator longus, rhomboid, supra-spinatus, infra-spinatus.

5th cervical: deltoid, biceps, brachialis anticus, long and short supinator, deep scapular muscles, rhomboid, clavicular portion of pectoral muscles.

6th cervical: deltoid, biceps, brachialis anticus, sub-scapular, pectoralis, serratus magnus, triceps, pronatores, latissimus dorsi.

7th cervical: triceps, extensores, pronatores, flexores, sub-scapular, pectoralis, latissimus dorsi.

8th cervical: triceps, flexores digitorum.

1st dorsal: extensores pollicis, musculi manuum interni, musculi thenares et hypothenares.

2nd to 12th dorsal: muscles of back, abdominal muscles and spinal erectors.

1st lumbar: none.

2nd lumbar: vastus internus.

3rd and 4th lumbar: sartorius, adductors, abductors, flexores and extensors of thigh.

5th lumbar: flexors of knee, flexors of ankle, peronei, extensors of toes.

1st and 2nd sacral: muscles of calf, gluteal muscles, peronei, extensors of ankle, small muscles of the foot.

3rd, 4th and 5th sacral: muscles of the rectum, bladder and genital organs.

The muscular areas in the above list are made up of areas of voluntary and involuntary motion.

Paralysis may be associated with loss, perversion or impairment of sensation (anesthesia, loss of sensation; paresthesia, perverted sensation; hyperesthesia, increased sensibility).

Manipulation and Vibration of the spine is capable of influencing these conditions.

The following list may serve as a guide:

2nd and 3rd cervical: occipital region and back of neck.
4th cervical: neck, front of shoulder and outer portions of arm.
5th cervical: back of shoulder, outer portion of arm to the wrist.
6th cervical: outer portion, front of forearm and back of hand.
7th cervical: radial side of hand, palm, index and one half of middle finger.
8th cervical: ulnar portion of hand, dorsum of hand and inner portion of forearm.
1st dorsal: inner side of forearm and arm.
2nd dorsal: inner side of arm near and in axilla.
2nd to 12th dorsal: chest, abdomen, upper gluteal region.
1st lumbar: groin and front of scrotum.
2nd lumbar: lumbar region, outer and upper portion of thigh.
3rd lumbar: front and outer side of thigh.
4th lumbar: inner side of thigh, leg and foot.
5th lumbar: back of thigh, outer portion of leg and ankle, sole and dorsum of foot.
1st and 2nd sacral: back of buttock and thigh, side of leg and ankle, sole and dorsum of foot.
3rd, 4th and 5th sacral: anus, rectum, penis, urethra, vagina and perineum.

Knowledge of these anatomical control-stations enables the physician to make direct applications of any suitable therapeutic agent; to the spinal centers for the purpose of influencing peripheral manifestations. The Osteopaths aim, to loosen the muscular structure, of special parts of the back, and correct the relative position of the vertebrae; by Manipulation, and by Swedish Movements. The application of Vibration is based on the same principle, although, as far as therapeutic efficacy is concerned, it is not equal to the Osteopathic method of manipulation, the claim of some anxious vibrator-makers not withstanding. **It is always wise to combine Vibration of the spine with vigorous Massage of the muscles of the back and with Swedish Movements to engage certain muscles and in this way force motion of the individual vertebrae in relation to the contiguous vertebrae. The same principles, in a somewhat varied sense, apply to Hydro-Therapeutic procedures** (douches and packs of the back). **The direction in which Electrical Force travels cannot be perfectly controlled** when applications of a galvanic, faradic, static or high-frequency current to the spine are made.

In cases of paralysis and loss of sensation the static spark applied directly to the spinal region, is probably the most direct and most effective mode of application.

Its action may be peripherally supplemented by sparks or faradic shocks applied to the affected muscle or muscles. For this purpose the rheotome in connection with a faradic current is very serviceable. **The wave-current applied to a paralyzed muscle by means of one or more pieces of blocktin is very useful.**

The region treated will, by its anatomical location and peculiarities, to some extent determine the exact manner of Electro-Therapeutic Application and Technique. To increase the nutrition and metabolism in any affected region local applications of a mild galvanic current or a static spray or a high-frequency may be added. For faradic and galvanic applications one pole should be placed over the point of insertion (or origin) and the other over the belly of the muscle.

Electrodes carrying galvanic currents should be shifted about.

The average duration of an Electrical Treatment in these cases is 15 minutes, to be repeated every day.

Sparking should not be done for more than 5 or 10 minutes.

Unnecessary irritation of the skin must be avoided." - Prof Dr Otto Juettner, AM, Sc.M, MD, ME, PhD, Professor of Practice, Cincinnati Post-graduate School of Physiological Therapeutics, Fellow American Academy of Medicine, American Association for the Advancement of Science, Association of American Medical Editors, American Electro-therapeutic Association, American Physiotherapeutic Association, London Roentgen Society, German Roentgen Society, Societe de Radiologie et Electrologie, Paris, in "A Treatise on Medical Practice", 1916.

Colonic Irrigation as a Factor in Eliminating Focal Infection

Dr Atmar S. Holley asked if any connection between asthma and colonic cases. Cited recent case of Asthma improved by Colonic Irrigation.

"The indication for Colonic Irrigation is not as limited as formerly considered, in fact if the proper technic, care and solutions are used to meet each individual case there are very few contraindications for its use.

The colon occupying the position in the digestive tract that it does, necessarily subjects it to all manner of abuses and insults.

Its fundamental problem is that of elimination and any disturbance of this function, whether it be from habitual abuses, congenital malformation or altered physiological function of the upper digestive tract, result in detriment to every vital part of the body.

Habitual abuses of the colon as applied by gastroenterologist means improper food consumption, with procrastination in answering the call of nature for bowel evacuation. These abuses are responsible for more pathology than any other factors governing the health and welfare of individuals.

There are a great many more improprietaries relative to habits but those two

cardinal ones, are responsible for a vast majority of human ailments.

When such habits are indulged in over a period of time there must be result of putrefaction liberating Toxines, that have a direct effect upon the intestinal mucosa thereby infecting lymph gland, and channels which carry to all parts of the body, especially to the portal circulation appendix, gall bladder, kidneys, pancreas, stomach and duodenum.

When one of these organs becomes so involved under colonic infection that the symptoms are directed to that particular organ, it is either operated upon or undergoes a long period of treatment without permanent results in either regime.

This is particularly noticeable in a great many appendix and gall bladder cases. If proper Colonic Elimination is neglected, these same cases are returning complaining of the same symptoms in a relatively short time.

If every colon functioned properly, surgery of the gastro-intestinal tract would become almost a lost art within a short time; the internist would be considerably more limited in his work, and there would be no place on the calender for the gastroenterologist.

Congental malformation; is responsible to a great degree for improper Colonic Function.

In the embryo rotation and unfurling of the tract in development is often greater probable infection of teeth and sinuses. Most in one portion than in another causing all manner of kinks , loops and elongations acting as a physical barrier to proper function.

The construction of the musculartture of the large bowel is perfect for the performance of its duty so long as all factors are working in harmony, however it is easily influenced by various stimuli and reflex innervation causing either stasis or spastic condition, inhibiting proper elimination.

Almost from time immemorial the first thought in treating disease was to secure proper elimination of waste products or end products of metabolism.

The kidneys, skin and breath have a vital function to perform in this respect, however if the colon is in perfect condition the kidneys and skin have just such work as they are especially constructed and adapted to perform.

A statement made by the late eminent scientist and scholar, Dr Jaques Loeb, relative to elimination says:

> ***"Jaques Loeb, How patiently he explained to me at the Rockefeller Institute the mystery of the sliver taken from the heart of a chicken which his colleague. Carrel, has endowed with immortality. The specimen is preserved under a glass. It is washed regularly with certain solutions which eliminate all deleterious by-products of the process of living. Both its anabolism (the building up process) and it catabolism (the tearing down process), are controlled by science. That was perhaps 10 years ago. Today Jaques Loeb is no more, but the chicken heart continues to defy death, and time. It has***

> ***lived for 16 years under the observation of the biologists of the Rockefeller Institute. In all that time it has continued to grow. "In a sense", Professor Loeb remarked to me, "the problem of rejuvenation is already solved. Carrel's experiment shows that it is possible to renew the cells of the body by constantly supplying it with nourishment and by eliminating all impurities. "Science has established the immortality of the chicken heart. Sooner or later the channels of irrigation, the organs of respiration, the arteries, which carry the blood, the lymphatic vessels, in fact, all vital organs are filled with waste matter, debris of the process of life. The glands are no longer able to neutralise poisons. All functions deteriorate. In time the organs cease to function at all. Old age and death are the logical sequence. If it were possible to flush the complicated network which nourishes the body and acts as a channel to carry waste matters out of the body, the individual, barring accidents, would be practically immortal." - Santa Ana Register, 12 May 1929.***

The complexity of our physical organization makes it impossible to equalize the income and outgo of the human body but, with proper assistance, the outgo through the colon by irrigation can relieve to a great extent absorption of Toxines which have a lasting effect upon the system.

The profession as a whole have been very alert in finding and combating focal infection but for some reason there has been delay in accepting colonic focal infection as an entity. The caecum and ascending portion of the colon permits of water absorption, disentergration of bacteria and oxidation of the unconverted bile pigments. This function is controlled to a great extent by antiperistalsis which allows the contents to remain a sufficient length of time before passed on to the descending colon for evacuation.

Any alteration or undue delay in this process will be indicated by symptons of focal infection just as the absorption of toxic materials from an ulcerative condition of the bowel, or from other parts of the body.

During several years of x-ray experience, I have x-rayed several hundred cases of of these cases were suffering from some form of arthritis, which could be demonstrated by x-ray of the parts involved.

A great majority of these cases were negative for infection of the teeth and sinuses, furthermore in a great per cent the focus was never located. Governed by results in cases of this character, where the focus was never located, I am fully convinced that a majority of obscure focal infection could be relieved had proper attention been given to the larger bowel.

The absorption of toxic material has a direct route to enter the system through the portal and hepatic circulation. Any disfunction of the liver, and biliary systems will allow a general distribution of these elements causing all manner of manifestations of focal infection, therefore to this problem should be one of the first in ferreting out symptons due to toxic absorption.

The indication for Colonic Irrigation is not as limited as formerly considered,

in fact if the proper technic, care and solutions are used to meet each individual case there are very few contraindications for its use.

Until recently, I considered it folly to irrigate a spastic colon, and when performed under the ordinary method of irrigation, I still consider it more or less detrimental but under a newer method, some results can be obtained which are very pleasing.

Irrigation will cure spastic colitis, it will relieve a big factor of absorption which may be responsible, through the Reflex System for producing such a condition.

The purpose of irrigation is to clean the bowel as other foci of infection should be cleaned and drained, giving the system a chance to recover from the over load of toxines. Irrigations should be given with much care and attention.

It is my custom to study the large bowel while doing the irrigation.

Every case of toxic absorption arising from the colon, from a therapeutic standpoint is individual and should be treated according to its own indications.

With proper understanding of this phase, and a strict adherence to the set principles, better results will be secured by proper elimination processes.

It must be understood that some colonic conditions are truly secondary to pathology of other parts and that treatment directed to the real cause will not produce the expected results unless the factor of absorption from the colon is fully controlled.

When infection is the underlying cause, the focus must be removed to prevent the colitis itself from a source of danger to the appendix, gall bladder and liver; also arthritic and rheumatoid conditions are produced in the same manner. Purgation alone will not cleanse a bowel so that it will be free from toxic substance nor will 1 or 2 light irrigations free the toxic element but irrigations given at such intervals as the individual case will demand will have a decided lasting effect upon colonic focal infection.

(Read before the Harris County Medical Society)

Discussion

- Dr M. D. Levy: This is a subject to which much attention should be paid. In various parts of the country colonic irrigations are used in almost everything, especially where focus of infection is supposed to exist but cannot be found, and treatment is directed towards the colon in order to eliminate this as a possible source. Intelligent use of colonic irrigations involves its use in conditions where infection actually exists in the colon itself, such as: acute colitis, mucous colitis, chronic co-litis, and ulcerative colitis. Colonic conditions so frequently are due to extrinsic factors, therefore cases should be carefully studied and selected.

- Dr Gibbs Milliken: I recently observed the case of exfoliative dermititis

with multiple diverticulae of the colon. Considerable difficulty was encountered in getting the diverticulae thoroughly cleansed out but after this had been accomplished the dermititis completely cleared up." - Dr Atmar S. Holley, MD, Houston, in "Colonic Irrigation as a Factor in Eliminating Focal Infection", Medical Record and Annals", 1930.

Visceral Disease Is Always Accompany By Mental Changes

"We are all conscious that our Mental Well-Being is Dependent on the Right Activity of our Internal Organs, and daily experience shows that grave Mental Disturbances may Arise in Connection with Visceral Disease.

Such mental changes may be produced in many different ways:

1. A disturbed activity of the heart may alter the circulation to the brain or may change the character of the blood with which it is supplied. The delirium that I accompanies a failing heart or profound vascular degeneration may be instanced as an example of a mental changes dependent directly on altered vascular conditions.

2. Disease may attack some organ which in health produces a substance necessary for the normal metabolic activity of the tissues. Thus, destruction of the thyroid gland is followed by the characteristic hebetude of myxoedema, owing to the absence from the body of some constituent manufactured by that gland.

3. Disease may attack some excreting organ and thereby lead to the retention of toxic agents in the blood. Such toxic substances are probably responsible for the morbid mental states which frequently accompany disease of the kidney and liver.

4. Visceral disease may so lower the resistance of the nervous system that a poison such as alcohol, already circulating in the blood, can produce mental changes differing perhaps both in quality and intensity from those which would have been produced by the same poison under other conditions.

5. Lastly, disease of the viscera may so lower the patient's resistance that some inherent mental tendency may become manifest as active mental disease.

It might be thought that all changes in mental states directly traceable to the presence of some visceral disease could be ascribed to one or more of the above causes. But now that disease of internal organs has been shown to be accompanied by pain radiating around the surface of the body and by tenderness of its superficial coverings it becomes necessary to examine in bow

far the intrusion of such stimuli upon the nervous system are accompanied by changes in consciousness. It is my intention therefore to bring before you in these lectures a group of changes in consciousness mainly associated with the reflected pains of visceral disease.

These mental changes are recognised by the patients themselves, and in some cases are associated by them with the first appearance or progress of their disease.

The patients I have studied for this research belonged to the usual hospital class, and more particularly comprised such members of this class as suffered from pulmonary, cardiac, or abdominal disease.

I have included no patient who had been insane or was suffering from any form of nervous disease. I have excluded all those with an hereditary taint of insanity, and all Hebrews, owing to the recognised tendency of this race to functional neuroses.

Under certain conditions sane persons suffering from visceral disease are liable to develop hallucinations of sight; of bearing, or of smell.

Hallucinations, of taste also probably occur, but I shall neglect the possible occurrence of this form of hallucination. For, owing to the condition of the tongue, it is usually impossible to be certain that the sensation of which the patient complains has no objective basis.

Now, I hope to be able to show you that in most cases the reflected pain of visceral disease is the main factor in the production of these mental changes.

I have attempted to show that the most various diseases of internal organs are liable to be accompanied by changes in the mental state of otherwise sane persons. The only factor that is universally present is reflected visceral pain.

This type of pain is produced by impulses passing from the affected organ up the fibres of the sympathetic, through the ganglion of the posterior root, into the central nervous system. A disturbance is thereby set up in those segments that stand in relation with the affected organ. Other sensory impressions entering the same segments are modified, and pain is produced radiating round the body, accompanied by increased sensibility to pain of the superficial structures of the body within the supply of the affected segments.

But it must not be supposed that every case that suffers from visceral reflected pain and its accompanying superficial tenderness must therefore immediately show mental changes.

There are many cases in which the patient has been admitted free from all mental changes but has developed them in association with extension of the disease during his stay in hospital. It was then possible to watch the development or disappearance of the mental changes with the coincident appearance or disappearance of reflected visceral pain and tenderness.

But even so, the full mental effects of menstruation cannot be eliminated, and the fact that a greater number of women than men showed these mental changes must be put down in part to the predisposing influence of menstruation.

Fever also favours the production of these mental changes, not only by decreasing the resistance, but also by causing wide-spread generalisation of any reflected pain that may be already present. Thus one case developed marked reflected pain and superficial tenderness with a sudden rise of temperature that lasted 2 days. During this period she experienced her first hallucination.

But here, as in all similar cases, we have to deal not only with the effect of the fever as such on the mental state, but also its indirect effect due to the sharp increase in the visceral reflected pain that it may produce.

This is probably one of the reasons why pulmonary tuberculosis is more commonly associated with these mental changes than cardiac disease.

For most cases of Pulmonary Tuberculosis are febrile, and the daily rise of temperature tends to cause an otherwise localised outburst of reflected pain to spread widely. Anaemia also predisposes to the appearance of these phenomena, not only directly but also by favouring the appearance of reflected pain in answer to very slight visceral disturbances. But the severest cases of anaemia, pernicious anaemia and allied conditions, do not, as a rule, suffer from reflected pain, and the majority remain free from the mental changes described above. But in the last stages many of them develop a form of delirium which bears no relation to the phenomena under discussion.

Loss of weight, especially when rapid, seems to predispose to the appearance of these mental changes, but in no way determines their appearance.

But in the last stages of tubercular disease, when profound wasting has taken place, a slight dementia may come on characterised by extreme loss of memory and attention. Whatever accessory factors may play a part in the production of these phenomena the main factor is the presence of Reflected Visceral Pain Accompanied by Superficial Tenderness. The depressed mood, in relation to reflected visceral pain is in some ways clearer than that of any other of these phenomena. This depression is in reality an acute alteration of feeling-tone in the direction of ill-being. It is in no sense an intellectual state induced by the thoughts and worry engendered in the patient's mind by the illness from which he suffers. This mood may make its appearance apart from reflected visceral pain as a light form of true melancholia, and also in some neurasthenic states.

the word “mood” to indicate a state of mind in which consciousness is dominated by feeling-tone but where the resulting state is not projected.

But in order that this mood may be produced the pain must be of considerable intensity or duration, or must occur frequently. It is not sufficient that a patient should suffer from even considerable pain of the reflected visceral type if he has been healthy up to the time of its origin. The oftener visceral pain has appeared the more easily will its reappearance be accompanied by the mental changes. Pain of the reflected type calls up the whole field of visceral activity into consciousness, and it is probable that those who are the subjects of these mental changes are thereby rendered more susceptible to normal alterations in visceral feeling-tone which would otherwise have passed unobserved.

This would seem to be one cause of the exalted sense of well-being that

sometimes appears in cases of visceral disease. Some patients volunteer the statement that the appearance of an hallucination is accompanied by a bad headache, and most complain that "the vision", or "the funny sounds", or "the filthy smells", always "make my head ache very badly." Moreover, in no case where I have made a complete examination within 24 hours from the occurrence of an hallucination was scalp tenderness of the reflected visceral type absent. All the thoracic organs and most of those in the abdomen receive fibres from the vagus. Impulses pass up these fibres to the head, and according to the usual rules that govern the appearance of reflected pain, should be reflected along the somatic branches corresponding to the visceral afferent fibres of the vagus.

Now Gaskell suggested that part of the trigeminal or fifth nerve corresponded to the somatic branches of that set of nerves of which the vagus represents the visceral branches. And as a matter of fact pain impulses ascending the vagus from organs in the thorax and abdomen actually cause pain and superficial tenderness over certain portions of the scalp.

Thus it may be that there is a close association between the vomiting centre and that for smell; and it is easy to see the reason for such an association." - Dr Henry Head, MD, FRS, Assistant Physician to the London Hospital, delivered before the Royal College of Physicians, in "Certain mental changes that accompany visceral disease", Brain, 1901.

Relation of Mental Symptoms to Bodily Disease

"Dr Raw, MD in "Liverpool Medico-Chirurg. Jour., October 1902, p**oints out the importance of this relation. "Temporary mental disturbances observed in association with lesions of various viscera", bearing in mind Maudsley's dictum in his "Pathology of the Mind", that "It is impossible to be out of sorts physically without being out of sorts mentally." These conclusions are based on the observation of about 26,000 ordinary hospital cases.**

According to Dr Henry Head, mental changes are produced by:

1. **Circulatory Disturbances;**
2. **Disease of some secretory organ, as the thyroid;**
3. **Disease of some excretory organ (as the kidney) which may cause retention of some toxic substance in the blood;**
4. **Poisons circulating in the blood, such as alcohol;**
5. **"Visceral Disease may so lower the patient's resistance that some inherent mental tendency may become manifest as active Mental Disease."**

The writer refers to **"Reflected Visceral Pains", in which Mental Symptoms may exist indirectly (Reflexly).**

He refers to **changes in consciousness from the above cause,** in an anaemic case **(hallucinations of sight, hearing and smell).**

Depression, delusions of suspicion and hallucinations of sight or hearing may occur.

In cardiac disease associated with pain, and a tenderness over the forehead, the patient may develop hallucinations of smell and of taste; or a mild delirium may develop.

In failing compensation, hysteria and hypochondriasis may present to an annoying degree.

Mental symptoms in exophthalmic goiter, myxedema, diabetes, chorea and the acute infective fevers, are all rehearsed." - Dr Raw, MD in "Liverpool Medico-Chirurg. Jour., Oct. 1902.

The Following Chapter is from the Book: "The Unknown Causes of Disase, The Idiopathic Nature of Medicine", Chapter 11, 2021.

Chapter 34

Causes of Mental Disease

Is A Well Known, And Established Fact that; Mental Health Conditions Are Directly Influenced By the State of the Gastrointestinal Tract. If the Gastrointestinal Tract is Inflamed the last think you want to do, is to further disturb it with Synthetic Medical Trade Pharmaceutics.

"Dyspepsia (with its many phases), Is Produced in great part By the Misuses and Abuses of the Stomach and Digestive System, by Errors in the Selection of Food or Mistakes in the Quantity that is consumed, or by the Neglect of other Essential Conditions of Nutrition. Some of the diseases of the locomotive apparatus arise from violations of the conditions of their being and of the law appointed for their action, weakness or disease, are manifested in the digestive organs.

The stomach and the other parts of the nutritive apparatus are ordained to convert enough food into chyle to replenish the blood, and to supply it with the means of repairing the waste of the textures.

When this organ is in good health, when the food is of a proper kind, and taken in due quantities and at suitable seasons, and all the other circumstances and conditions are properly attended to, the work of digestion goes on easily and satisfactorily, and the wants of the blood are supplied.

From Errors in the use of both the physical and the intellectual powers there proceed all grades of disorder, from the slightest languor or irregularity to positive and severe exhaustion and disease.

All the organs and their functions are subject to these gradations of disturbance, and none more than the digestive and the nervous systems.

A man may indulge his appetite with food of such kinds, or in such quantities, as require but a little more than his usual and average digestive power to convert it into chyle.

He may repeat this through months, perhaps through years, before the over-draft upon his gastric force produces a sensible weakness or pain, and even then the cause of the digestive trouble, the waste of power, and the accumulated disorder are overlooked; for it is not easy to understand or believe, that an article of diet or gastronomic indulgence, which had been so long not only harmless, but, on the contrary, comfortable, should at length become injurious.

Ever-watchful Nature, although generous in her provisions for and bountiful in her gifts to her children, is yet inflexibly just and rigorous in her dealings with them. She requires of every one the complete fulfilment of the conditions of life. She gives to each his due and sure reward for every instance of faithfulness, and exacts from each the penalty corresponding to every

disobedience, in the use of all the organs, and all the powers, whether of body or of mind, that are bestowed upon man.

All the Consequences of Neglects and Violations of the Law are gathered, in every instance, and charged to the vital capital; and their sum, in every succeeding period, may be found, according to its extent in:

Mental or Physical Disorder, in Reduction of Strength, in the vitiated constitution." - Report of the Trustees of the Massachusetts General Hospital for the Year 1858, in "The North American Review", Vol.89, N.185 October 1859.

Mental Influence

"A Healthful State of the Mind and Feelings is as Important as of the body, for the feelings constitute, through life, an ever-acting source of bodily health or disease; and upon their proper regulation; Most of The Happiness and Value of Life Depend.

It is fully established by practical fact; that each and all the passions and emotions of the mind, when once too strongly excited, are but the more easily excited again and again, and for a longer time, by the repetition of the same cause.

By repeated and continued excitement, any one of them may be made to become the predominant habit of the mind.

This important truth, a knowledge of which is so essential, especially to mothers, or those having the care of young children, seems to be little known, and little cared for, in the raising of their children. In many instances it is a common impression, that when a child has been frightened, or otherwise alarmed by any noise, or by the sight of any object, repetition or exposure to the same influence will have a tendency to remove the pain from its mind; and for this reason children." - Dr John Gunn, MD, in "Gunn's new Family Physician", 1868.

Auto-Intoxication as an Etiological Factor in Many Forms of so-called Mental Disease

"It is the purpose of this paper to; **Call the Attention to The Importance of Auto-Intoxication as an Etiological Factor in Many Forms of so-called Mental Disease.**

The Results of My Experience lead me to believe that This Is A Factor, on which too little stress has been laid, and if such a thing can be proven, **its value both as concerns treatment and prognosis cannot be too strongly emphasized.**

The theory of **Auto-Intoxication is not new, and it has been suggested by many,** very little attempt has been made to give it careful study, and if this paper does no more than to stimulate investigation along these lines.

The basis of the paper consists of the study of my own cases and the stated opinions of men from different parts of the country whose experience renders their statements worthy of consideration.

If it can be shown that **Auto-Intoxication Is A Definite Factor in the Causation of Mental Diseases**, its importance in planning the course of treatment and in making the prognosis can only be fully appreciated by those constantly in touch with such cases.

It will certainly mean that many of the cases which are now sent to the insane hospitals will be received at the general hospitals for observation and treatment, not as insane people, but as cases of Auto-Intoxication; which require active treatment, such as is almost impossible to give on a large scale in any of our state institutions today. **Also in private practice, many patients now treated as cases of purely Mental Disease will be treated for Auto-Intoxication. It Is Undoubtedly True that some forms of Insanity affect the digestive functions and general metabolism, and undoubtedly it is equally true that the primary disturbance of metabolism is at times the cause of mental alienation. This is seen in some of the infectious diseases, as typhoid fever, or with the glandular diseases, such as thyroidal and adrenal diseases (according to Dr Andriezen, acromegalia).**

It seems probable and quite in keeping with the general trend of medicine today, as well as only a step beyond the conditions already recognized, that many of the mental disorders now not generally associated with infection will be shown to be due to such a cause.

Spitzka in America, Clouston and Kraeplin in Europe, **have Failed to Discover Any Change in the Brain in cases of Melancholia, Acute Mania, and some of the other forms of Mental Disease.**

If this is true, why continue to class these diseases only under the head of "Diseases of the Brain"?

And waste our time trying to prove that the brain is diseased; when in other Toxic Cases, Malaria, Influenza, Typhoid, Pneumonia, Rheumatoid Arthritis, etc., we consider such symptoms due to Perverted Metabolism, or the Work of Bacteria, and successfully treat them on these lines.

There is a suggestion in several of the books of early writers on medicine that Auto-Intoxication was considered one of the causes of certain Mental Diseases, and, although they did not use the word "Auto-Intoxication", They Evidently had This Cause in Mind, and Considered it of Great Importance. Culpepper prior to 1654 says:

> *"There is in Galen (A.D. 201) and almost all authors, a three-fold epilepsy. The first is that which hurts the brain, in which the disease is; the second is that which hurts the brain by consent from the stomach; the third is when the disease is sent from other parts of the body to the head.* ***But it is remarkable and well known that an Epilepsy comes for the most part from the Guts the matter that breeds worms, from the matrix and other parts. Of Mania; wherefore it is probable that some certain poison bred in the body, may be the chief cause of madness. The matter producing this disease is contained in the veins and arteries, either of the whole body or those nearest the brain, or in the vessels of the brain."***

Burton in his "Anatomy of Melancholy," 1638, says:

> ***"Of Retention and Evacuation, of Meat and Drink there be divers kinds, which are either concomitant, assisting or sole causes many times of Melancholy. Galen reduceth defect and abundance to this head; others all that is separated or remains."***

The **authors of today almost invariably in writing of mental and nervous diseases refer in a few lines to Auto-Intoxication as one of the causes of certain forms of Insanity,** which should be arrested as soon as possible, but I fail to find one writer in any book or work who devotes even 1 chapter to Auto-Intoxication, or **the results of Auto-Intoxication as a disease of which the mental condition is only the result rather than the cause itself.**

Defendorf in his excellent translation of Kraepelin says:

> ***"If the researches of Kranisky, Cabbito, and Ayostini can be substantiated, it would seem probable that genuine Epilepsy is due to a Toxic condition arising from Faulty Metabolism, and that the immediate cause of the appearance of convulsions is the accumulation of deleterious substances in the blood."***

Of dementia precox he says:

> *"In consideration of the close relationship with the age of puberty, the presence of disturbances of menstruation, and the frequent appearance of the disease for the first time during pregnancy and puerperism, further assumption is made that it is the result of Auto-Intoxication. Defective heredity, as well as imprisonment and acute diseases, is presumed to act by lessening the power of resistance to auto-intoxication."*

According to **Bouchard:**

> ***"Arthritism is made up of a host of manifestations that all appertain to an arthritico-nervous cycle, in which we find, side by side; Migraine, Epilepsy, Gout, Hysteria, Rheumatism, Diabetes, etc.,*** *and is* ***especially characterized by a tendency to congestion, by reason of which, or on account of some yet unknown cause, the general nutrition is profoundly altered. Arthritic subjects are often dyspeptic, some having dilatation of the stomach, others intestinal indigestion. This is a source of toxic action, by way of Auto-Intoxication."*** *- Dr Bouchard, MD*

He also says that "Neurasthenia is one of the most frequent of the neuroses Related to Arthritism, and that Arthritism maybe the Originating Cause of Hysteria (Bouchard, Charcot), Epilepsy (B. Tessier), Angina Pectoris (Landouzy),

and Paralysis Agitans (Pierret, Vansella). Therefore, if Auto-Intoxication is one of The Underlying Causes of Arthritism, it is one of the Originating Causes of Neurasthenia and the diseases just mentioned."

Dr Keene in quoting Bouchard says:

> ***"Auto-Intoxication in Mental Diseases was one of the chief topics for discussion at the Annual Congress of French Alienists (Psychiatrics) held at La Rochelle, August 1894. At that time Dr E. Regis, and Dr A. Chevalier-Lavaure, made a most masterly report. They distinguished 3 orders of clinical facts, and considered separately the mental disorders that develop as a result of:***
>
> ***1. Acute Infectious Diseases***
> ***2. Visceral Disturbances***
> ***3. Diathetic Maladies."***

We all know that typhoid and Eruptive Fevers, "grip," erysipelas, puerperal fevers, etc., are often times followed by the most marked insanities.

Whence comes this if not from toxins peculiar to the disease?

How much more rational this than the theory of nervous shock whose influence must be transitory?

The Delirium of Fever is surely the result of Deficient Excretion; once make this free and delirium ceases, temperature falls.

Dr Regis, and Dr Chevalier-Lavaure ask in this connection if Infectious Disorders are not sometimes the cause of general paralysis.

Dr Aldu Blumer, Utica State Hospital, New York, answers:

> ***"For my own part, I believe this opinion is not susceptible of any very great generalization, but that it nevertheless is based upon actual facts."***

With regard to Visceral Disturbances Causing Insanity, he says:

> ***"Visceral Disorders also Often Produce Insanity. This is well known, and the earlier writers localized insanity in the liver and the bile."***

The 3rd group of Regis and Lavaure is Auto-Intoxication from Diathetic Maladies.

With regard to this Blumer says, editorially:

> ***"A powerful argument in favour of the Origin of Insanity by Auto-Intoxication is deduced from the fact that anti-infectious, antiseptic treatment, either general or local, has often given excellent results. If this theory is true then The Treatment of Insanity must be revolutionized, and the infection, the Auto-Intoxicant, must be combated and eliminated if we wish to eliminate the disease. How we can best do this is a problem yet to be solved."***

Dr Gray, states that **Intestinal Derangements often Cause Melancholia, and the most frequent of these intestinal lesions is a functional derangement of the duodenal region of the small intestine. Of Epilepsy,** he says it is a fact of practical importance, and one that seems to be almost universally overlooked, that P**rofound Malnutrition may be a Cause of Epilepsy.** At a meeting of the Medical Society of London recently an interesting **Discussion on Epilepsy was held, and Russell stated that the theory of Auto-Intoxication as a Cause of Epilepsy had the most supporters.** Krainski, in his study of Epilepsy, says that on the days it attacks, or just preceding them, the output of urea is greatly diminished. **In this condition of disturbed metabolism, the system is supposed to form ammonium carbonate instead of urea. This compound gives off ammonia which Krainski believes causes the fits.**

Again, Mott, Halliburton, and Donath believe that **the Alkaloid Cholin found in the Cerebrospinal Fluid in many cases of:**

1. **Epilepsy**
2. **Locomotor Ataxia**
3. **Paretic Dementia**
4. **Brain Syphilis**
5. **Brain Tumor**

Is the cause of disease in many people that are afflicted with these troubles.

By Injecting Choline into the Cerebro-Cortex of animals Julius Donath; has produced localized and general convulsions in them.

By the Injection of a Salt Solution no such convulsions have been produced.

If these observations are carried on still further with the same results Epilepsy will be classed among the Auto-Intoxications.

Dr Robert H. Chase, MD, in "General Paresis, Practical and Clinical", 1903:

> *"There is a tendency to believe the theory first set forth by Angiolla that* ***General Paresis Is A Toxic Affection Produced By Auto-Infection; either directly or indirectly through an Interference with Nutrition.***

> *According to those observers the baneful influence of alcoholic abuse and licentiousness; as well as M**ental Overstrain is to be sought also in these Nutritional Defects that Contaminate the Blood with Poisonous Products which Induce the Degenerative Changes in the Nervous Tissues."***

Pershing says:

> *"Analogy leads us to believe that such terrible **emotional disorders as melancholia, mania, acute delirium and transitory frenzy are forms of intoxication, and if the cause of any emotional disturbance is obscure, we should always carefully consider the possibility of its being a poison of some kind."***

Brown Sequard, showed that the section of certain cutaneous nerves, thereby cutting off the corticle influence on the hair bulbs, will cause the hair to become white on these spots and, shows the mental effect where those centres are disturbed.

Dr F. Peterson, MD, in "Nervous and Mental Diseases", 1899, says:

> ***"Toxic Influences: It is not surprising that deleterious agents in the blood, which bathes every cell and fiber of the nervous system, carrying thither the necessary nutritional elements and removing thence the waste products, should readily overstimulate, retard, pervert, or destroy its high functions. Some of these agents (like alcohol) also affect the nutrition of the central nervous system, by inducing disease of the arteries and of the stomach, liver, and kidneys. Some of the poisons cause insanity by long-continued chronic action upon the nervous system, and others by acute intoxication. Auto-Intoxication: Accumulation of deleterious agents in the blood in such quantity as to affect the nervous system; e. g., carbonic acid and the poison of diabetes and of uremia; has been long known to medical science; but the more mysterious poisons produced by disease in various parts of the body, by fermenting or putrefying substances in the alimentary tract, and by some of the acute infectious fevers, have only of late taken an important place in the etiology of the psychoses. We do not yet know how frequently auto-intoxication from absorption of intestinal poisons determines insanity, but the facts thus far collected point to the origin of a considerable number of cases from this cause. These cases are usually of depressed type, but sometimes maniacal. Researches in physiological chemistry of digestion, as well as observations in many pathological conditions, have substantiated that auto-intoxication from the absorption of poisonous substances generated in the alimentary canal by putrefactive and fermentative process is not only a real thing, but a frequent factor in the etiology of a number of nervous disorders, such as: Headache,***

> ***Neurasthenia, Hysteria, Neuralgia; and even graver maladies like: Epilepsy, Melancholia and Mania. It behooves us, therefore, in these diseases, to investigate carefully for evidence of any such cause. Periodical or constant attacks of gaseous diarrhea are somewhat indicative of this condition. Frequently, the condition of the bowels furnishes no information of the actual state of affairs. Recent researches tend to show that an excess of ethereal sulphates in the urine (indican) in connection with other symptoms is a good index of Auto-Intoxication."***

Dr Daniel Clark, MD, in his "Mental Diseases: A Synopsis of Twelve Lectures Delivered at the Hospital for the Insane", 1895, says that: In Melancholia there Is Defective Nutrition throughout the body as is evident in Non-assimilation and Mal-assimilation of food.

> *"The Bodily Functions are unsatisfactory, as a rule, in true Melancholy.*
>
> *1. Defect of nutrition throughout the whole body, as is evident in non-assimilation or mal-assimilation of food.*
> *2. The skin is dry and is often of an unwholesome tint.*
> *3. The hair is dry, harsh, and often lacks natural smoothness.*
> *4. The mouth is dry ; the tongue is furred; the bowels are constipated; the urine is loaded; the pulse is slow; the body temperature is lowered; in short, the sum total of the bodily processes are below par or wanting in vigour.*
>
> *This description is intended for a typical and profound case of insane melancholia. When the feeling of misery is not very great, these pronounced symptoms may be very much modified. Many have delusions of a positive nature; but we have many cases, especially in the initiatory stages, in which nothing is prominent but a sense of ill-being, in which is abject misery. Melancholy comes on in its invasion as such, and does not spring out of any other form of insanity, as a rule. Other forms may be planted on it, such as mania and dementia; but not it on them. Usually the onset of melancholia is gradual. In this it differs from many other forms. The dulness, the inertia, the uneasiness and the lessened interest in life may not be noticed by friends at first. In a retrospect of a pronounced case, these changed conditions are remembered as the first departures from the normal standard, and also how insidiously they come on. A large proportion of young patients recover, and often rapidly and completely."*

Among other recent writers who mention autointoxication as a cause of mental disease, or refer to it in some way, is Regis, who states that among the several cases of melancholia, autointoxication, especially a gastro-intestinal one, is much more frequent than is commonly supposed. It may commence with gastro-intestinal disorders or be consecutive to a more or less ancient dyspepsia.

Dr Allan McLane Hamilton, in a paper on this subject states that a study of the cases that formed the basis of observation by him for a year unquestionably bear out the assumption that disturbances of the Gastro-Intestinal Tract, more often than is generally supposed, are attended by Bacterial Necrosis, and the introduction into the general circulation of certain very Virulent Toxic Agents; whose Effects are Expended Mainly Upon the Nervous System.

He says:

> *"I think I am safe in saying that nearly all the rapidly developing confusional insanities have this explanation, and we must, therefore, be on the alert for such a cause, even when the case has commonplace features. No other alternative has presented itself so strongly to my mind as that of intestinal putrefaction, and in all the patients whose urine was examined a decided increase in the amount of indican was found even when the diet was carefully regulated. From the data obtained from all available sources, my own cases and others, it would appear not only that the ratio of the sulphates between themselves and to the urea, and the presence of indican in considerable amount, are indications of intestinal putrefaction, which, no doubt, influence the course of various insanities, but that a large increase of the combined sulphates has much to do with the genesis of various psychoses."*

His conclusions are:

1. Urines rich in indican contain very little or no preformed sulphuric acid, and are toxic.
2. When the sulphate ratio is materially changed, it is likely to indicate autotoxis in connection with an increase in the amount of combined or ethereal sulphates.
3. Such conditions are generally found with acute insanities, in which rapidly developing symptoms occur.
4. Fugacious and changing illusions and hallucinations, unsystematized delusions, confusion and verbigeration in connection with insomnia, pallor, intestinal indigestion, constipation and rapid exhaustion are due to autotoxis.
5. Paranoiac states, or those in which concepts are the features, chronic stuporous conditions, and certain forms of dementia have little to do with the formation of intestinal products of putrefaction.
6. Various post-febrile, traumatic, alcoholic or drug insanities are those in which autotoxis is most constant.

7. The variation in the excretion of combined sulphates keeps pace with the changes in the progress of an established insanity, acces and epileptoid attacks being directly connected with putrefactive processes.

The president of the Medical Society of London pointed out in 1896, that there was a well-known type of hypochondriacal melancholia associated with catarrh of the transverse colon in which mental characteristics were out of proportion with the lesions, cases in which there was no family history, and the symptoms readily yielded to a visit to Carlsbad, or Marienbad. He said he had often thought that the symptoms in those cases might be due to excessive production of ptomaines in the intestines. Brunton suggests that the lassitude and drowsiness which are so apt to follow a full meal may depend upon the absorption of an excess of the normal digestive products, and so be a mild manifestation of Auto-Intoxication. Most of the severe constitutional disturbances associated with gastric disorders in childhood are believed by Heubner to be due to auto-intoxication. Of the chronic intoxications of gastric origin those associated with dilatation of the stomach deserve special mention. In this condition there exists every favourable condition for the formation of fermentative and putrefactive products and for their absorption. These intoxications accompanying gastric dilatation are especially characterized by the periodicity of the appearance of the symptom. Among other chronic intoxications may be mentioned migraine, certain other periodic headaches and neuralgias, and possibly, too, the gastric crises of tabes dorsalis.

Dr Page, the Superintendent of the Danvers Insane Hospital, **believes that many of his cases commence with the condition of auto-intoxication; that possibly many cases of Dementia Precox (schizophrenia) start this way,** and that he hoped something would eventually be done to prevent the progress of these cases.

Dr Bigelow T. Sanborn, Superintendent of the Maine Insane Hospital, Augusta, says that he is Quite Sure Auto-Intoxication becomes a contributing Cause of Insanity; that he has recently had one case about which he is decidedly of that opinion, and estimates that in at least 5% of the admissions to the Maine State Hospital, there is evidence that auto-intoxication has played an important part in incipient stages of the disease.

Dr R. M. Elliott, Superintendent of the Willard State Hospital, of New York, says:

> ***"Judging from our experience; Auto-Intoxication plays a part as an exciting factor in a considerable number of cases of Insanity."***

Dr E. C. Dent, Superintendent of the Manhattan State Hospital, West, Ward's Island, New York City, says:

> *"There is no question in my mind that a number of Psychoses have as their basis Auto-Intoxication. It is quite probable that in course of time dementia paralytica, dementia precox and the insanities occurring in epilepsy will be traced to auto-intoxication. We have for some time been making careful studies in this direction, but as yet I feel that the results we have obtained have not been sufficiently established to justify me in bringing the matter before the profession. It is conceded that the most prominent physical symptoms we find in insanity is that of disturbance of nutrition, due to derangement of the gastro-intestinal tract."*

Dr H. E. Ellison, Superintendent of the Matteawan State Hospital of New York, says:

> *"Many manifestations of mental disease depend upon auto-infection, not only from the intestinal tract, but upon disorders of other excretory channels. Derangement of the digestive organs and consequent evils, are, in our opinion, responsible for many conditions of ill health and for various forms of insanity. For 4 or 5 years medical literature was filled with discussion upon this topic. Personally we have felt that it is responsible for many maniacal outbreaks, for many states of mental depression, and have always directed our attention in a therapeutic way to such conditions, often with satisfactory results. In melancholy if the patient can be made to think that he has some tangible foe to combat he will feel much relieved in mind; that his liver, his digestion, his intestinal functions are at fault, as they usually are, and that his mind is depressed by an impoverished circulation due to toxic agencies in his blood, he will feel that he has something to hope for in the way of eventual relief."*

The derivation of the word "melancholia" throws some light upon its most common etiology; the two Greek words "melas" meaning black, and "chole" meaning bile, while not accepted in their original application and significance in the sense of meaning that melancholia is actually due to bile in the blood, yet disturbances of the digestive regions, the intestinal canal and the liver have a most important relation to the production of the disease.

Dr H. L. Palmer, Superintendent of the Utica State Hospital, New York, says:

> *"I think in most cases an hereditary tendency or a neurotic disposition will be found to exist in conjunction with the Auto-Intoxication. It is my practice to look thoroughly to the alimentary canal and relieve any and all irregularities so far as possible. There is no doubt a disturbed metabolism in many forms of mental ailment, particularly the various forms of the depressive psychoses."*

Dr C. Spencer Kinney, MD, of the Middletown State Homoeopathic Hospital, New York, in the State Hospital's Bulletin, Vol. II, says:

> ***"Many Cases of Melancholia have Auto-Intoxication as a Prominent Feature."***

The 14th Annual Report of the New York State Commission, ending 30 Sept., 1902, gives diseases of the digestive system, blood and circulation as the cause of 514 out of a total of 1,808 deaths which they had in all of their Insane Hospitals.

Dr Edward N. Brush, Superintendent of the Sheppard and Enoch Pratt Hospital, Maryland, says:

> *"Students of psychiatry have recognized for a long time that what is commonly called autointoxication probably enters largely into the causation of a large number of cases of insanity, but we know too little of auto-intoxication to be able to determine exactly what the form of poison is to be able to classify our cases in such a way as to definitely state which are clearly cases depending upon auto-intoxication as the exciting cause and which are not, although in the majority of instances a careful examination of the case and a thorough knowledge of the previous history of the case will throw much light upon the subject. Not only is auto-intoxication looked upon as a causative factor in many cases of insanity (and by auto-intoxication, I suppose you mean the poisoning resulting from the defective elimination from the body of certain products of digestion or from formation of a poison in the digestive tract or in certain of the glandular elements of the body having to do with the tissue metabolism), but there are many forms of insanity that are clearly recognized as toxic in their origin, eliminating from this category cases which are plainly toxic originating from alcohol, minerals like lead, and certain drugs. I have for a number of years now in lecturing to students pointed out the resemblance between toxic and auto-toxic insanity in their clinical manifestations and that a large number, certainly in their early stages, closely resemble the deliria observed in pueumonia and typhoid fever, for example."*

Dr Geo. O. Welch, Medical Superintendent of the Fergus Falls State Hospital, Minnesota, says:

> *"Speaking in general terms the larger number of our cases are suffering from auto-intoxication on admission to the hospital. But it certainly has considerable effect in prolonging the unbalanced mental condition and making it more severe; for in most of the cases restoring the physiological functions to healthy action, especially paying attention to the digestive tract, so that the food is properly assimilated, will produce a marked change for the better in the patient's mental conditions."*

Dr H. A. Tomlinson, Superintendent of St. Peter's State Hospital of Minnesota, says:

> *"Practically every patient received in this hospital is suffering to some extent from the ill effects of Auto-Intoxication."*

Dr W. B. Fletcher, an alienist of Indianapolis, Ind., says:

> *"It is my opinion that by far the larger number of cases of epilepsy and insanity are due to auto-toxic conditions; mal-assimilation most common, hepatic and renal follow in order. Hepatic toxins most frequently manifest in melancholia; renal in acute mania of confusional insanity, so called, with delirium. As to classification, I am inclined to the oldest, that of Hippocrates, if I use any, viz., melancholia and mania, and could, like Cullen, if desired, form a hundred sub-classes, and endless varieties. In some cases of melancholia I have seen almost every form of insanity protrayed in its various stages, and what seems a case of acute mania to-day may be profound melancholia to-morrow. Several persons under the influence of the same poison will not have similar psychical reactions; auto-toxic effects are as different in their manifestations as there are differences in the amount of grey matter and the structure and number of convolutions, which differ in all persons as much as do their facial expression. The terminal arteries in some cerebral ganglia and convolutions are abundant in one person, in another with the same weight of brain there are but few, therefore, more or less toxins are received, and different phenomena result from the same remote cause."*

Dr S. E. Smith, Superintendent Eastern Indiana Hospital for Insane, says:

> ***"Cases of Auto-Intoxication due to the absorption of the products of Intestinal Sepsis, and the like, we classify under the true Insanities."***

Dr. Max E. Witte of the Clarinda State Hospital of Iowa says:

> *"I will say that I have been convinced by careful study of many cases of insanity that the first beginning of many forms of acute affective disorders, such as melancholia and mania, often, if not altogether, have their primary inception not in the brain, but elsewhere, usually in the organs of the abdominal cavity. I have been led to this belief through the study of the emotions associated with the functions, either healthy or disturbed, of the vital organs of digestion, nutrition and elimination, including the hemapoietic structures, such as the spleen and lymphatic glands. I am satisfied researches through the laboratory will be rewarded by important discoveries in the future. A routine examination of the cases coming in for many years have, on the whole, revealed a deterioration of the blood, more especially a diminution in the formal elements of the blood, particularly in the red corpuscles, also a corresponding lowering in the percentage*

> *of hemoglobin. These uniform findings certainly argue disordered and diminished metabolism, but of course, I have not the exact data to determine definitely whether this diminution should be looked upon in the light of result or of cause; possibly both, since it seems to be a segment of a vicious circle. As to auto-intoxication, it is a matter of everyday experience and observation that insane patients coming here, whether the disease has existed a long or short time, are usually obstinately constipated, and one of the first indications in treatment is a measure adapted for the evacuation and regulation of the intestinal tract. So far as we can usually learn from inquiry of the more intelligent patients or from their friends, thus condition has existed during the duration of the disease and often prior to it. Now and then we have met with cases of marked and grave dementia associated with a myxedematous condition of the skin, who responded promptly to and recovered under the administration of thyroid extract. We have had no cretinism so far in this part of the country."*

Dr J. W. Wherry of the Clarinda State Hospital, Iowa, in a paper written for the Alienist and Neurologist, May 1904, advocates limiting the Term Insanity, to Delusional Cases, and gives as a part of his classification:

Insanity	**Toxic :**	Infection Psychoses Intoxication Psychoses
	Auto-toxic :	Mania Melancholia Manic-Depressive Paranoia Exhaustion Psychoses

All of these he classifies as results of defect of the mind rather than of defect of the brain. In the 3rd Biennial Report of the Board of Control of State Institutions of the State of Iowa, Chapter 6, on Insanity, I find the following:

> *"It is rarely that we find a case of insanity in which there is not associated, and very frequently causing the disorder, a derangement of digestion, nutrition, or elimination. The first urgent need to be met by treatment is the restoration to normal activity of some vital organ or organs. In other words, a great majority of patients coming under care require treatment for diseases other than insanity, and happily, in many, with recovery from bodily disease, restoration to mental integrity takes place."*

Dr James L. Green, Superintendent of the Nebraska State Hospital for the Insane, says:

> *"In my judgement, the majority of cases of the Depressed types of insanity admitted to the Hospital are due to some form of Auto-Intoxication, as, indeed, are many of the cases of acute maniacal excitement. Especially, am I convinced that all of the cases of acute Delirious Mania, sometimes called Bell's mania, are of this origin."*

Dr T. J. Mitchell, Superintendent of the State Insane Hospital of Mississippi, says that for 2 years he has been impressed by the fact that quite a number of diseases are due to Auto-Intoxication, both mental and heart failure, and that recently he has been paying special attention to the bowels of his patients as being the medium through which is the chief source of Auto-Intoxication.

Dr M. L. Graves of the Southwestern Insane Asylum, Texas, says he regards Auto-Intoxication an exciting cause in the development of Mental Disturbances, especially Melancholia; 33% of his deaths in 1902 were caused by diseases of the stomach, lungs, bowels and kidneys.

Dr F. Forschheimer of Cincinnati, Ohio, is a firm believer in the important role played by Auto-Intoxication. He says:

> ***"We all recognize the Psychoses of Graves Disease, and again the psychoses characterized by depression which are absolutely relieved in a large number of cases by the Treatment of Intestinal Auto-Intoxication. Another class that has been relieved on the principle of Auto-Intoxication are some of the Menopause Psychoses. The criterion we have for judging of the existence of Auto-Intoxication is the therapeutic result."***

Follin and Shaffer, in their reprint on Phosphate Metabolism, state as a result of their work in the Chemical Laboratory at the McLean Hospital on a case of Manic Depressive Insanity, the following:

> *"The existence of an unmistakeable periodicity in the elimination of phosphoric acid through the kidneys corresponding to the periodicity in the mental condition of the patient is, we think, proved by our analysis and experiments."*

Heinicke in his psychiatric practice was impressed with the frequency of phosphaturia and carbonaturia in his patients. He has found manifest or latent ammonuria or phosphaturia in every patient exhibiting a psychosis. He further noted that the urine returned to normal as the mental affection progressed toward recovery. The phosphaturia generally accompanied the height of affection.

It is possible that the subsidence of the ammonuria or phosphaturia may be an aid in prognosis, and their absence may also serve to reveal simulation.

Dr Arthur W. Hurd, Medical Superintendent of the Buffalo State Hospital, Buffalo, N.Y., in "Clinical Aspects of Auto-Intoxication", Proceedings of the American Medico-Psychological Association", 1897:

> *"It is not in old chronic patients with fixed delusions and with an apparently healthy digestive apparatus that acute intestinal intoxication is to be expected, but rather in acute cases with changing delusions, muttering incoherence, restlessness, constipation, elevated temperature, offensive breath, and dry, hot or clammy skin. It is conceded by many and an increasing number of students, that intestinal putrefaction is evidenced by the presence of indican in the faeces or by the conjugate sulphates and indican in the urine. In suspected cases the examination of the dejecta should be made in the laboratory as corroborative proof, though their absence would hardly justify the observer in withholding the measures necessary for relieving the condition referred to."*

Dr Van Gieson, in discussing Dr Hurd's paper, says:

> *"After all, this theory is not entirely new, but is simply an extension of the old humeral theory of disease which, in its relation to the induction of mental disease, was expressed so well 100 years ago by Benjamin Rush, who declared in substance that madness arose because the brain shared with other organs in the body the damage inflicted by gout, dropsy, rheumatism, eclampsia of pregnancy, the fevers and the like. Excluding cases of insanity of psychic origin, we must conclude that a good share of mental disorders is to be ascribed to a toxic agency, particularly those belonging to the most subtle class of poisons, the autogenous category. Any thorough comprehension of the toxic basis of mental and nervous disease beyond speculative hypothesis has been rendered possible only within very recent times. The precise knowledge of the structure of the nervous system attained by the application of the Golgi methods (silver staining technique that is used to visualize nervous tissue under light microscopy), the clear insight into the action of the bacterial poisons upon the tissues given by experimental pathology, and, above all, the progress of modern cytology and the application of its methods in pathological research, have at last removed the barriers to comprehensive investigation of mental and nervous diseases. Much time has been wasted and much confusion has arisen in the investigation of neural disease by studying the nervous system as something apart from the rest of the body, and often enough it has been made, to appear that the nervous system had a radically peculiar structure of its own, and a "sui generis" set of pathological changes different or distinct from lesions elsewhere in the body."*

A prominent Dentist of Boston says:

> *"I think Auto-Intoxication in the alimentary canal plays an important part in the*

> *infection of the mouth. It has seemed to me, in my examinations of the saliva and of urine in cases of interstitial gingivitis, that I have found the most important indication for treatment to be the thorough cleansing of the alimentary canal. One patient may show uric acid diathesis, and another only poor nutrition, but in most cases there is a failure on the part of the patient in his daily life to have the alimentary canal thoroughly clean, and as a result he becomes Auto-Intoxicated."*

Spitzka says:

> ***"There is no clinical difference between the condition of many Dyspeptics, who never become Maniacal, and some Maniacs in the Prodromal Stage of their Disorder."***

Such are the statements of men who from their positions and experience are justified in having definite opinions upon such matters.

My own experience leads me to an even stronger feeling in regard to the place of the Auto-Intoxications in the etiology of mental disorders, and it is hoped that, with the work which is being carried on, more conclusive proof in support of these opinions can be presented in the near future." - Dr L. Vernon Briggs, MD, Physician to the Mental Department Boston Dispensary, in "The Boston Medical and Surgical Journal", 5 January 1905.

The Relation of Oral Infection to Mental Diseases

"It is with a certain amount of hesitation that one proclaims an apparently new fact in medicine, especially when such a fact seems to be entirely fanciful to the majority of professional men, both physicians and dentists, who naturally are highly skeptical regarding new methods and new findings. I think that we, of the medical fraternity, have been equally at fault, in failing to correlate dental and medical problems. **That a very close relationship exists between Infected Teeth and Systemic Diseases is a fact that has only recently been recognized.**

Barker, of Johns Hopkins University, has reported cases of Pernicious Anaemia which cleared up after extraction of Infected Teeth.

Secondary Foci of Infection

That infected teeth alone could cause very serious systemic diseases was demonstrated by Hastings in 1914; by Billings and his co-workers in 1916.

Their work called the attention of the medical and dental professions to **the importance of the teeth as a source of infection.**

Rosenow likewise has shown that these organisms tend to migrate to other organs, and there set up secondary foci. How the organisms reach distant organs is not plain; probably, in a large majority of cases, through the lymphatic

system, and seldom through the blood stream, although occasionally the latter system is involved.

In culturing the blood, in a large number of living patients and also at autopsy, we have seldom isolated these bacteria. Hence, from our experience, we are inclined to think that the main channel of migration is through the lymphatics.

There can also be direct transmission of the bacteria, through swallowing, to the Gastro-Intestinal Tract; but even here we are inclined to the opinion that the infection travels by way of the lymphatics for reasons I shall explain later.

In about 25% of our cases the teeth alone seem to be the source of infection and, with the removal of this source, our patients rapidly recover. In speaking of mental cases we mean the so-called functional group for which no definite etiology had previously been found. Gibson, formerly of the Boston Psychopathic Hospital, has recently reported a series of cases of this kind. These types comprise the majority of our admissions. One group, the manic depressive, tends spontaneously toward recovery in the majority of cases but shows a tendency to recurrence.

The other types belong to the dementia precox group, and show a tendency to chronicity and dementia. These we have previously not been able to benefit. It is to this latter group that we feel the importance of our work applies, for we can undoubtedly restore them if they are treated early in the course of the disease. As already stated, in about 25% of our cases in this group, the teeth alone are the etiological factor; in another group, about 25%, both the teeth and tonsils are at fault, and have to be eliminated if we wish to restore the patients. In a third group, about 50%, the gastro-intestinal tract is also involved, with either the teeth or the tonsils, or both; and we did not get any results in this class until we were able to determine the types of infection and establish means for their elimination. One might with reason ask: "Why bring in gastro-intestinal infection in discussing teeth, a purely dental problem?" The explanation lies in the fact that the infected teeth, or the bacteria concerned in this infection, have a direct and very important relation to the pernicious activity of the colon bacillus. This organism occurs normally in the lower intestinal tract. Outside of its normal habitat it is extremely toxic; it loses its benign character and becomes pathological.

To the question: "What causes the benign colon bacillus to become virulent and migrate to other organs", we frankly answer, we do not know. We do know, however, that, in the stomach, duodenum and kidneys, it is usually associated with Streptococcus viridans; and it would be well within the range of probabilities that this latter organism, by its toxic influence, stimulates the colon bacillus to virulency. Or, it may be, that streptococcus in the mucosa of the intestinal tract provides an outlet for the colon bacillus, by so damaging the mucosa that the latter organism passes through it into the lymphatic circulation and by this means of egress proceeds to distant organs. We know that when the colon bacillus is migratory it also is virulent and toxic.

I lost several cases, from general colon-bacillus toxemia, before this fact was recognized and its influence overcome by autogenous vaccines, in accord with Satterlee's views. Consequently, while apparently we can see no relation between infected teeth and intestinal infections of a chronic type, clinically there is a very dose relation. It is well for the dental profession to recognize all the consequences and results of chronic root infection and to end, once and for all, this far-reaching and dangerous type.

I feel that I do not overstate the facts when I say that insanity can be prevented or cured by a conscientious practice of the principles discussed in this paper; and that, in the same way, many other diseases which, in most cases have a fatal termination, can also be prevented or cured if the process has not gone too far.

General Considerations on Nervous and Mental Diseases

If we can substantiate our contention that a certain percentage of nervous and mental diseases are results of toxemia from chronic focal infections, the sources of which may be multiple and therefore difficult to locate, then the logical method of curing these diseases would be to eliminate such foci of infection wherever found.

This may sound easy; but, from three years' experience with these problems, I can state that not only is the difficulty of locating foci of infection a tremendous one but the problem of eliminating them when found is almost stupendous. It takes patience and ability to stick to the work of elimination, which is hard for one who has not had the experience to realize. It should not be difficult for the alienist to accept the principles discussed in this paper since, for years, we have recognized the fact that infections and toxemia cause mental disease, and have thus diagnosed a small group of such cases as "toxic-infectious psychoses."

We were not the first to show that by eliminating infected teeth mental diseases could be cured. In 1908, Henry S. Upson, MD, published his work on the relation of infected teeth to certain nervous and mental conditions. He reported cases of the so-called functional psychoses as both dementia precox and manic depressive insanity, which recovered when impacted and unerupted molars were extracted, and root infections were eliminated.

We who have been dealing with the insane, or as we prefer to say, those suffering from mental diseases, have for years isolated ourselves from general medicine and have considered the patient wholly from the standpoint of the mental picture. While we have made advances in the care of these patients, our recovery rate has not changed, except for the worse, in the last 50 years.

In spite of the fact that many patients showed evidence of profound physical disturbances on admission to the hospital, this fact was ignored; and we neglected even to ascertain what physical condition the patient was suffering from.

I plead guilty to this charge and will state only one extenuating fact: we treated these patients on admission as sick and kept them in bed until they had gained physically.

This treatment may account for the fact that our recovery rate has been between 30% and 40% annually, based upon the admissions, while the average in the majority of state hospitals has been about 15%.

We have made the mistake of considering the mental disease as the principal factor to be studied, but have learned that the mental symptoms are merely incidents in the general infection and Toxemia. Some cases, with severe infection, do not present any mental or nervous symptoms. Other cases, with a mild infection, may show very slight physical disturbances; but the nervous system may be affected to a profound degree and may never return to normal.

We do know that "Streptococcus viridans" consists of and embraces more than one race of bacteria, with various characteristics and perhaps certain selective properties as claimed by Rosenow, which can account for the causation of articular rheumatism in one individual, neuritis in another, or toxic myocarditis in a third.

One strain may be more toxic than another and therefore affect the nervous system. We have only been able to find in one case the organism in the brain itself, hence we assume that the toxemia is the causative factor in mental disease.

Again, we must take into consideration the constitutional reaction of patients to these poisons (as we do in the case of alcoholics); also the susceptibility and lack of resistance of individuals to certain infections. These 2 factors, the type and characteristics of the organism plus the individual's reaction, may determine the pathological process and its variation in different persons.

Examination of the Teeth

When the teeth are badly decayed or the gums are unhealthy, purple, swollen, we extract all capped and pivot teeth, and remove all fixed bridge work. These experiences make us suspicious of all crown and bridge work in our patients mouths. I wish to correct an erroneous idea regarding the effects of extracting many teeth upon a patient's nutrition. In my experience, all patients from whom the infected teeth were extracted immediately began to gain weight, and it is not unusual for them soon to gain 20 or 30 pounds, even when all the teeth have been extracted and no artificial teeth have been supplied.

Infected Tonsils

In about 25% of our cases the tonsils as well as the teeth -are infected.

Gastro-Intestinal Tract

In about 50% of the cases there is involvement of the stomach, duodenum or lower intestinal tract, with either the teeth or the tonsils, or both. There may be very severe symptoms, producing discomfort to the patient; but in many instances these symptoms are due to the general toxemia from infection of the teeth or the tonsils, and not to an infection of these organs.

In such cases the removal of the infection in the teeth and tonsils will clear up the symptoms; but we make a routine examination of the gastro-intestinal tract in all patients and, when infection is present, it is treated by means of autogenous vaccines, made from the bacteria found there. Streptococcus viridans is the principal infecting organism. In a small number of cases, we find a virulent colon bacillus. Both are concerned in the toxemia. For the past 2 years we have been convinced that some of our more severe cases had profound gastro-intestinal infection.

Draper has called attention to the importance of the duodenum as a source of absorption of toxic products and our experience corroborates his contention.

Draper's work represents years of hard labor and painstaking experimentation, and has furnished us not only with valuable data regarding the relation of the duodenum to toxic absorption, but also with facts concerning the whole gastro-intestinal tract.

Draper has thrown light upon the problem as no other man has been able to do. His knowledge of intestinal pathology will be of utmost value in further determining the relation of infections of the lower intestinal tract to the whole subject of focal, or chronic, infections. Satterlee, another colleague of Draper's and Lynch's, has shown, in many publications, the importance of the toxemia resulting from the virulent colon bacillus and also the means of combating this infection." - Dr Henry A. Cotton, MD in "The Relation of Oral Infection to Mental Diseases", Journal of Dental Research, Vol. 1, Issue 3, September 1919.

> *"In discussing this question, we are referring to the so-called functional types, usually grouped under manic depressive insanity, Dementia Praecox (schizophrenia) and the paranoid states, in which no acceptable etiology has been found. If we are to consider definite disease entities, and place these groups in distinct classes, it will be difficult to understand the significance of their common aetiology, namely, chronic infections and the resulting Toxemias. As a direct result of our work we must either change our diagnosis, in the cases which recover from Dementia Praecox, to manic-depressive insanity or admit that Dementia Praecox is not the incurable malady we have believed it to be." - Dr Henry A. Cotton, MD, in "The Relation of Oral Infection to Mental Diseases", Journal of Dental Research, 1919.*

Psychological Disorders

"Anxiety and Depressive Disorders Are Associated with both Irritable Bowel Syndrome (IBS), and Ulcerative Colitis (UC). The non-specific Association Between these Psychological and Gastrointestinal Disorders, could suggest that chronic gastrointestinal illness might affect psychosocial behaviour." - in "Psychological Disorders in Gastrointestinal Disease: Epiphenomenon, Cause or Consequence", Annals of Gastroenterology, No. 27, 2014.

The Aetiological Factors in the Psychoses

"From a study of the cases reported here, which are only several among many similar types observed in the last 3 years, **we are convinced that Chronic, or Focal Infections, with the resulting Toxaemia, play a very important role in the Aetiology of the Psychoses."** - Dr Henry Andrew Cotton, MD, Medical Director of the New Jersey State Hospital; Lecturer in Psychopathology, Princeton University in "New York Medical Journal", 8 and 15 March, 1919.

Delirium

"Is in itself divisible into active (wild or maniacal), passive (low, muttering). Furthermore, a delirium may be wholly nocturnal and in all acute diseases tends to assume that form or merge gradually into it during convalescence. Delirium Tremens and the fully developed cases of typhoid fever illustrate respectively the active and passive type. **Delirium, aside from brain lesions, Indicates Chiefly Toxaemia, or extreme exhaustion, But May be seen in Hysteria, and Occasionally in Epilepsy."** - Dr Charles Greene, MD, in "Medical Diagnosis; a Manual for Students and Practitioners", 1907.

The Role of Auto-Intoxication in Mental Disorders

"I greatly appreciate the honour which the Society has done me in asking me to read a paper by way of introducing a general discussion on the treatment of mental disorders. My remarks will deal with the relationship of physical disorder to mental symptoms. The main point to which I will more particularly draw your attention is to the need for a closer study of the extent to which mental symptoms are the result of some auto-intoxication or infection from one or other of the free mucous surfaces of the body, the gastro-intestinal tract being, in virtue of its size and function, the most important channel.

The literature of the subject contains many references of a general kind to what is called the toxic factor in the aetiology of insanity. In this connection it is right to refer to the valuable and suggestive work carried out by Lewis Bruce many years ago, the probable significance and value of which has, been largely lost sight of. There is little new in the conception of the aetiology and treatment of mental disorders, which I am going to present for your consideration.

Prof. Robertson has lately drawn my attention to the interesting fact that the leading alienists in France more than 100 years ago entertained the view that the primary cause of mental disorders was to be found in visceral changes.

Pinal in his classical text-book on mental disorders in 1809 wrote as follows:

> *"It seems that the primitive seat of insanity generally is in the region of the stomach and intestines, and it is from that centre that the disorder of intelligence propagates itself as by a species of irradiation."*

Again, in the standard work of Broussais published in 1822 we find the following:

> *"That most ordinarily, except the traumatic cases the morbid irritation is communicated to the brain by the mucous membrane of the digestive system."*

And in a later paragraph he reiterates the view in the following:

> *"I insisted particularly on this point; that the gastric stimulations often maintain the cerebrals, and consequently the mania."*

I have largely restricted my survey of the literature to the study of the transactions of the Journal of Mental Science; the official organ of this Association; for the past 20 years, as the papers published in that period, with the excellent summaries of the literature provided, adequately reveal the general outlook and the practice of alienists in regard to the relationship of physical disorders to mental disease.

In 1903 the late George R. Wilson, Physician Superintendent, Mavisbank, and the writer published a paper on **"Some Visceral Lesions in Acute Insanity", in which an attempt was made to correlate the physical and mental changes.**

This paper gives a fairly full clinical and pathological record of the cases on lines not previously followed, attention being directed to several sources of latent chronic infection, and their influence on irritation of the brain and the incidence of mental symptoms.

The 1st patient was a young woman of 25, suffering from Mania, following Erysipelas, following Malnutrition, the illness being fatal in a few months.

The summary of the post-mortem appearances was given as follows:

> *"Dilatation of stomach and duodenum, enlargement and caseation of mesenteric glands, chronic gastro-intestinal catarrh, localised pulmonary areas of pneumococcal infection with fibroid changes around, sclerosis of the bony system with profound alterations in the bone-marrow, enlargement of the thyroid gland, brain cortex congested, and chromatolysis in the nerve-cells."*

The 2nd case, a woman age 39, a case of acute mania following many previous attacks with rapid progress to a fatal issue, the summary of the pathological changes in this case being as follows:

> *"Dilatation of stomach with pronounced atrophy of its coats, chronic intestinal catarrh, marked deposit of pigment in spleen and liver, slight interstitial changes in the kidneys, chronic disease of the bladder, sclerosis of the bony system with profound alterations in the bone-marrow, brain cortex congested, and chromatolysis in the nerve-cells."*

This paper included a fairly full description, with numerous photographs of the microscopic appearances of the stomach, small and large intestine, bladder and other viscera. It was pointed out that the main changes observed were:

> *"Manifestly those of chronic irritation, which we may presume to be synonymous with chronic bacterial infection."*

The Toxic Origin of Mental Disease

There are, many general references showing a trend of opinion pointing to the probable importance of **The Toxic Origin of Mental Disease.**

In "Notes of Three Cases of Insanity, Toxic in Origin", by Eric M. Thomson, in 1903, attention is drawn to the importance of the toxic element.

The essential facts of this interesting paper are embodied in the following:

> ***"Collectively, these cases are interesting because of their Toxic Origin, and as illustrating The Occurrence of Physical Symptoms Prior to Mental Symptoms."***

Prodromata of the Psychoses and Their Meaning

Dr T. S. Clouston, MD, President of the Royal College of Physicians, Edinburgh, in "Prodromata of the Psychoses and Their Meaning", Journal of Mental Science, April 1904, **the importance of nutritive and digestive disturbances is emphasised in the following terms:**

> *"It is a fact in Psychiatry, that* ***attacks of mental disease have early symptoms that are often not mental in character****; and it is equally true that in Neurology the fact has not attracted sufficient attention, that all sorts of sensory, Vaso-motor and motor symptoms may be the mere preludes to an attack of insanity and not of themselves the real disease.* ***Such Prodromata (signs or symptoms that occur before the onset of a disease, a warning sign of subtle symptoms, such as: fatigue, headache, or malaise, appear***

before a condition) of so serious an event as an attack of insanity are exceedingly well worthy of careful study *for many reasons, most notably because* ***the recognition of their true character and their explanation might enable us in many cases to anticipate and possibly to ward off the mental attack. The psychiatrist often considers a mental attack as being sudden in origin, and puts it down as an unled-up-to mental explosion, when in reality there had been sensory and motor symptoms, sleeplessness, and other indications which would have pointed to the existence of previous auto-intoxication, nerve exhaustion, or other disturbance.*** *The occurrence of a widespread disturbance of action in the highest cortical convolutions, such as takes place in an attack of acute insanity, must, after it has set in,* ***almost of necessity affect the sensory and motor as well as the nutritive and vaso-motor functions of the organ. As a matter of fact, such non-mental accessory disturbances and "bodily symptoms" are nearly always present.***

Sensory Symptoms

Speaking generally, and including their every degree, disturbances of common sensibility are by far the most frequent and immeasurably the least serious form of neurosis to which nervous humanity is subject. Many women are "seldom without" a headache during some part of every 24 hours. ***In a still greater number headaches are easily set up at any time by very slight causes; indigestion, want of sleep, changes of air and of temperature, worry, harassing domestic incidents, menstruation, over-fatigue, "excitement" of any kind, and alcohol are some of the causes which will inevitably produce headache-slight or severe, bearable or "paralysing."*** *Such nerve storms are commonly transitory and not of grave significance. There are many women, too, not otherwise neurotic, who are subject to headaches and other forms of the slighter sensory neuroses. If we could ascertain the etiology and the true meaning of such minor nerve disturbances we might find ourselves well on the road to the explanation not only of the sensory Prodromata of melancholia, but of some of the forms of melancholia itself. It must be assumed that each neuron, whatever its particular function may be, has an innate power of building up its stores of potential nerve energy (Anabolism) and of liberating these stores in a dynamic form (Katabolism), these 2 powers being balanced so that the neuron shall neither become, as it were, too full nor too empty.* ***These powers in the sensory neurons are influenced and probably regulated to a great extent from without by muscle action, by the innumerable and constant afferent impressions from the skin and viscera,*** *by direct "nterference" through other neurons, and finally by the blood current. Any disturbance of this most complicated series of conditions of right working in a "neurotic" subject may no doubt cause the danger signal of pain to be put out. To be "neurotic" or "unstable" in brain working means unresistiveness to the influences from within or without that are adverse* *to life and health. A cold day "braces" one man and brings on bronchitis in another. A difficulty in life, a calamity even, raises up in one man or woman a spirit of dogged fight to overcome or endure it, in another it breaks down the fighting spirit and sets up melancholia. Mind, in fact, arises through sensations at first, "no sensation, no intelligence." A human being without sensation would necessarily be an idiot. For the great mental functions to work healthily, a healthy sensory system is unquestionably needed. If the sensory system is hereditarily weak or is exhausted or starved or poisoned, then the mental centres that it keeps going must soon exhibit disturbance. Hence I think we have the common sequence of sensory neuroses and melancholia. It is a physiological and psychological fact far too often forgotten, that for a healthy working mind we must have a normal working sensory apparatus. Why does sunshine produce cheerfulness? Or fresh air a feeling of organic comfort ? Or the sweet influences of nature mental calmness? The first step in the process is the reception of the sensory impression, the second is the mental effect. The mental areas are only got at through the sensory. to the mental cortex, and melancholia or mania, stupor or mental dissolution come next as natural physiological sequences. The sensory areas are the gateways to mind, and so suffer first.* ***An over-sensitive constitution is commonly the basis of the melancholic diathesis.*** *This means that the sensory impressions in such a case are strong and overpowering.* ***A current of electricity sent to a muscle may give tone to it, or may set up a convulsion, or may paralyse it.*** *A sensory impression sent to a mental area may in like manner give pleasure, or it may stimulate unduly and so cause melancholic pain, according to its strength. The sensory symptoms of pain or of parresthesia are not confined to the head, though most commonly felt there.*

I have known many patients to have Spinal Pains, and Visceral Pains Preceding Attacks of Insanity.

For 4 or 5 days preceding each maniacal attack, she regularly has severe toothache.

The sensory prodromata of mental disease may take the form of disturbance of special sense functions. I had lately a lady who had marked Aggravations of Eyesight Symptoms, from which she had Always Suffered Before she became Melancholic. Nothing is more common than a super-sensitiveness to light and noises.

I have had cases where Tinnitus, and Buzzing Sounds in the ears preceded attacks of mania.

I had lately a woman who Became Almost Deaf for months before she became Melancholic. I have seen hallucinations of vision and hearing develop for weeks before the other mental symptoms came on, the patients knowing then that they were hallucinations. Flashes of Light before the eyes are very common Prodromata to Attacks of Mania. I have known the sense of Taste Changed, so that a man could not taste his food or his wine for some time before he became Maniacal.

Motor Disturbances

Many mental cases have symptoms which show that the motor centres are disturbed before the mental areas are involved. ***I have known attacks of acute insanity preceded by general convulsions; though localised twitchings are common enough.*** *That general condition of motor instability known as "fidgets" and muscular unsettledness is exceedingly common.* ***I have also seen a patient quite Amnesic (significant memory loss, typically involving the inability to form new memories or recall past ones) for days before the mania came on.*** *The most marked and characteristic Motor Prodromata of Insanity consist of changes in the facial and eye expressions. The muscles on which these expressions depend are very small, but most highly innervated, and have a reactiveness and wonderful power of co-ordination with each other far beyond any other muscles in the body. Being the mind muscles par excellence, they represent emotion and mental action with amazing subtilty and force. Before an attack of mental disease, they often become changed in activity in all sorts of ways. The most common effect is a slowing of their mental reflexes and a deadening of their subtle mechanism.* ***The man about to become insane is commonly changed in facial and eye expressions before his "mind gives way."*** *His eye is either dull or listless, or the cornea has the feverish light on it that accompanies acute insanity. The brow is furrowed, or fixed "lines of care" show themselves on the face of the patient who is approaching melancholia; the play of feature that gives beauty and interest to many faces is no longer seen. There is often an "abstracted" look in the face, which really means that the muscles of expression are morbidly at rest. In this state feeling is purely subjective, with a few objective facial or eye accompaniments.*

Neurastlunia

"Neurasthenia", frequently precedes mental attacks. *It is, as we all know, difficult to describe or classify, but it means nervous and nutritive exhaustion and unreactiveness to usual physiological stimuli.* ***It certainly has a close kinship to the psychoses in its nature.***

Insomnia

There is no Symptom More Common as a Prelude to the Acute Insanities in almost every form than Insomnia. It often precedes the mental attack by many months. *The mechanism of periodic brain rest in sleep is most intimately related to the mechanism and mental activity in the brain cortex. The whole body sleeps more or less, but the cortical vehicles of mind have their proper functions more completely suspended than any other organs during sleep. In no class of diseases is the sleep function so disturbed and so much* *an essential part of the disease,* **and so constant a prelude, as in the psychoses. When the mental functions are about to be disturbed, sleep is disturbed,** *may be put down as an axiom.* **When the proper balance between Anabolism and Katabolism is Disturbed in the Mental Area, then you have Insomnia, together with Mental Disturbances, Nightmare, Disturbed and Distressed Dreaming, and night terrors, all these being Common Preludes to Mental Attacks.**

Circulatory disturbances

All sorts of circulatory disturbances frequently herald an attack of insanity. Fainting fits, weak heart's action, palpitation, alterations of rhythm, striking changes in the vascular pressure, feelings of “sinking at the heart”, are all common. *I have seen in the “quick-pulsed” melancholiac the alteration of the heart's action for weeks before the mental symptoms come on, but this is the exception, no doubt.* **The capillary circulation often loses tone, the cold-resisting and heat-producing apparatus suffers. Vaso-motor disturbances occur, notoriously in the climacteric woman about to become insane, in whom Flushings, “heats”, sensations of giddiness long precede the mental symptoms.**

Blood Changes Anti Leucocytosis

Dr Lewis Bruce **has made the observation that after a patient has suffered from certain forms of mania there is a persistent leucocytosis***, and that if such a patient relapse there is a marked fall in the leucocytosis, and especially in the polymorphonuclear cell-percentage prior to the onset of the attack.*

Nutritive and Digestive Disturbances

Nutritive and Digestive Troubles Often Precede the Mental Symptoms for a long time. Indigestion, dyspepsia in every form, attacks of vomiting, anorexia, falling off in weight and muscular flabbiness are all common, especially Before Attacks of Melancholia. Constipation, and Altered Bowel contents in directions pointing to Imperfect Digestion, primary and secondary, are present in over 50% of the cases as Prodromata (premonitory symptoms or warning signs indicating the imminent onset of a disease) of various forms of Insanity. A Melancholia of the digestive tract in the shape of Obstinate Constipation and distressed feelings in the epigastric region precedes, and accompanies 50% the cases of Melancholia. I believe many Attacks of Insanity, are warded off by this means and by Appropriate Dieting, just as attacks of Epilepsy Are Often so Prevented. The Acuter Insanities, and General Paralysis are specially apt to be Preceded by Marked Intestinal or Gastric Catarrh. Certainly the extraordinary

developments of bacterial life in the mucous membrane of the stomach, intestines, and bowel, which Dr Ford Robertson has discovered and to which he has so strongly directed our attention in general paralysis and in senile insanity, are most striking, even if they should turn out to be only secondary instead of primary infections. I am satisfied from my experience that many attacks of mental disease could be avoided if digestive and nutritive prodromata were attended to and counteracted. It is not only true, "make a melancholy man fat, as Rhasis saith, and thou hast finished the cure", but "keep fat" if thou art prone to melancholy.

Menstrual derangements

Menstrual derangements are exceedingly common Prodromata of attacks of Insanity in women. Amenorrhrea is particularly common.

Mental Prodromata

Long before such mental symptoms appear as constitute " mental disease," we often see subtle mental changes, such as changed emotional states, "deadness" of feeling, hyper~sthetic emotional states, morbid anxieties, accentuations. of natural temperament, painfully conscious "nervousness", irritabilities, inability to fix the attention continuously on work, loss of energy, stubbornness, antipathies, mental automatisms, morbid suspiciousness, and the beginning of delusions of the nature of which the patient is then conscious. But those may fairly be said to be the psychoses in a minor degree and not really prodromata, but rather integral parts of the attack, though coming before the main symptoms.

General considerations

A general consideration of the character and frequency of such facts from the physiological and pathological, as well as from the clinical points of view, leads to the inevitable conclusion that an attack of mental disease is commonly not a simple or localised phenomenon. They show the solidarity of action of the whole of the brain and of the whole of the nerve centres in the cord and the special ganglia of the organic systems of the body. They point strongly to the importance of a more careful study and attention to such preliminary symptoms in predisposed persons. They emphasise the view that the whole class of "mental diseases" should be regarded and treated not as local disturbances, but as widespread departures from the normal physiological condition of the whole organism.

Discussion

> ***At the meeting of the Scottish Division held at Edinburgh, 27 November 1903.***
>
> ***Dr HAYES NEWINGTON - I am sure the hearers of this valuable paper are most grateful to Dr Clouston for having provided us with such accurate and faithful pictures of what we see so often.***
>
> ***Dr YELLOWLEES - We have listened to an extremely interesting paper, putting before us, as you have said, remarkably well facts with which many of us are very familiar. Perhaps the facts concerning those Prodromata, those early indications, are more seen in private cases than in asylum practice, because in the asylum the incipient and premonitory symptoms have disappeared.***
> ***Dr MARR – I have been much interested in the paper brought forward by Dr Clouston. The borderland between sanity and insanity; in obsessing persons the patients do not follow up their ideas to a logical sequence. The cause of the disease is in many cases produced by some autogenetic poison. Dr Haig, in his book on uric acid, shows the relation between 1uch autogenetic poison and nervous affection, and the danger in treating such cases is not so much in the way of under-feeding as in the way of over-feeding; too much nourishment may be given in the diet. and in this way material is provided which adds to the toxin already in the system." - Dr T. S. Clouston, MD, President of the Royal College of Physicians, Edinburgh, in "Prodromata of the Psychoses and Their Meaning", Journal of Mental Science, April 1904.***

In a clinical note on "General Antisepsis in the Treatment of Neuro-psychosis", published in the Journal of 1905, an account by Edward Blake is given of:

(a) "Case of Stuporose Insanity Stereotyped by Staphylotoxin."
(b) "Case of Epileptic Erotomania Stereotyped by Staphylotoxin."

The successful results that appeared to follow the author's treatment justified his conclusion that:

> ***"It is imperative that we should close up all the lateral avenues which might conceivably lead to self-infection; more especially by way of the cutaneous tract, by the alimentary canal, and by the genito-urinary apparatus. The fact cannot be too strongly emphasised that when toxins do not actually cause any given morbid state, they may often serve to stereotype it."***

In the same number of the Journal there appears a paper on "Mental Depression and Melancholia considered in regard to Auto-intoxication", with special reference to the presence of Indoxyl in the urine and its clinical significance; essay for which was awarded the Bronze Medal of the Medico-Psychological Association, 1904; by Arthur A. D. Townsend.

In this paper appears the following:

> *"For a long time I have strongly held the opinion, as a result of my own observations, that a very large proportion of cases suffering from Melancholia are due to Auto-Intoxication resulting from the absorption of toxins from the alimentary tract, for in depressed states generally there are various symptoms referable to disordered metabolic processes in some part of the Gastro-Intestinal tract. The symptoms in question that I consider as evidence of a state of toxaemia are as follows: foul breath, coated tongue, indifference to and often refusal of food, marked constipation, foul stools, anaemia (varying in degree), a sallow dirty skin, profuse perspirations and of offensive odour, skin irritations, eruptions, disorders of sensation often leading to flesh-picking, and headache. Of course we do not in any one case find all these symptoms, but there are several common to all cases of acute Melancholia."*

In 1906 Dr Lewis Bruce, MD, published a paper on the "Clinical Significance of Indoxyl in the Urine."

The 2 concluding paragraphs of that paper have a bearing on the present communication:

> *"That the presence of an excess of Indoxyl in the urine means a loaded alimentary tract, which should at once be treated by the use of Large Enemata; 1 to 1.5 litres of normal saline solution by preference; and the placing of the patient on a purely milk dietary. The whole alimentary tract can be rendered free from putrefactive processes by seeing that the mouth is kept clean; by the removal of carious teeth and by the use of antiseptic mouth-washes; by placing the patient on small but frequent quantities of milk diluted with water; and Washing out the Large Intestine with Enemata. The benefit of this treatment is most obvious, especially in patients who show symptoms of alimentary disturbance and toxaemia, and under such treatment indoxyl practically disappears from the urine."*

In a later part of the present paper reference will be made to The Value of Intestinal Lavage, and other measures on the lines referred to by Dr Bruce.

In the same volume there is an interesting paper by Dr Easterbrook on "Insanity and Indicanuria (Indoxyluria): A Note of Criticism."

Dr Easterbrook dissents from some of the conclusions drawn by Dr Bruce from his results.

He raised a practical and important point in the following quotation:

> *"**Does Constipation more commonly precede** or more commonly follow **the onset of Melancholia?** In my experience the proportion of cases in which there is obtained a **definite history of Constipation prior to the onset of Melancholia** is very much smaller than the proportion of cases in which the **Constipation** sets in after the **Melancholia** has commenced, and **the Frequency of Constipation in the course of Melancholia** is readily explainable by a passivity of the visceral musculature, comparable to the passivity of the voluntary musculature."*

This point will be later referred to; we have now in radiography after the use of bismuth meals a modern method of investigation capable of throwing great light upon the important question raised by Easterbrook.

Dr A. R. Urquhart, in the "Morison Lectures", 1907, r**eference is made to the importance of Oral Sepsis.**

Dr Urquhart reference is interesting:

> *"Dr Raynor's work in the Out-Patient Department of St. Thomas's Hospital has been **amongst the Insane**, and especially amongst incipient cases, and **his conclusion is that one of his most important duties has been to hand over these persons to the care of the Dental Surgeon. The improvement in Mental Condition** after his attentions are completed has been so remarkable that Van Der Kolk, might have added another sympathetic insanity to his list. I need not load this aspect of the subject with clinical details."*

In the same volume there is a contribution "Notes on the Management and Treatment of the Epileptic Insane", by G. Foster Barham.

There occurs the following paragraph:

> *"With regard to the second indication; **the removal of exciting causes; the effects of peripheral irritation, especially those which arise from abnormal states of the alimentary tract,** are too well recognised to require further comment. **Yet it is impossible to over-estimate the importance of a systematic examination of the mouth, especially the condition of the Teeth, which, in the class of patients admitted into county asylums, is usually deplorable. Not alone are the teeth carious, the gums soft, and in many cases***

> ***in a condition of suppurative gingivitis, but alveolar abscesses and even pyorrhoea alveolaris are frequently met with. Moreover in the states of hebetude and stupor into which those patients sometimes pass septic pneumonia is extremely liable to bring about a fatal termination."***

In a paper on **"Amentia and Dementia"** in the Journal for 1908, C. J. Shaw:

> ***"Cystitis occurs frequently in asylums, even in fairly healthy patients. In many cases I have found the Bacillus coli communis or an allied organism present in the urine. Obscure intestinal lesions are also common amongst the insane, and may, in some cases, be associated with this microbe."***

Lewis Bruce in the "Morison Lectures", 1908, on the "Symptoms and Etiology of Mania.":

> ***"I am firmly convinced that if we are to advance our knowledge of the intricate mass of symptoms called at the present day mental diseases, we must attack the problem from the physical side.*** *The mental symptoms must be to us mere incidents, nothing more, often assisting us in arriving at a diagnosis, but subsidiary and secondary to the physical symptoms which they so frequently mask, and which can only be demonstrated by direct and special investigation; investigations in which we can hope for no assistance from the patient, who not unfrequently is not in a state to render intelligent assistance."*

In the later part of his lecture Dr Bruce touches on the question of bacteria in the intestinal flora in the following terms:

> *"There are, therefore, many links in the chain of evidence wanting, but such evidence as is already in my possession is sufficient to warrant the general conclusion being drawn that* ***the diseases known as Mania is Due to Bacterial Toxaemia, which is in many ways Comparable to the Bacterial Toxaemia of Rheumatism."***

In the same volume there is an abstract of a paper by a French physician, André Prunier, **"Contribution to the Study of Auto-intoxication in Mental Confusion",** this being determined by an estimation of the toxicity of the urine as experimentally observed in animals.

His conclusions are given in the following:

> *"He concludes from his own cases, and from a review of the literature that* ***there exists in most patients suffering from confusional insanity some gastro-intestinal toxines. Owing to an excessive production and absorption the kidney*** *is stimulated to further*

> *work, so that there appears "a hypertoxicity of the urine." But* ***this "hypertoxicity of defence" is not equal to the amount of toxine absorbed from the intestinal canal, so that an auto-intoxication of the body is produced which manifests itself by various physical signs and by the appearance of mental confusion. After injection of the hypertoxic urine all the animals died in convulsions*** *— in opisthotonos with trismus, never in coma — and he attributes this to the presence of a ptomaine in the injected urine. The question of auto-intoxication is most interesting and fascinating, and about which much has been written."*

[The toxicity of the urine has been determined in several diseases, general paralysis, epilepsy, etc.] Mervyn A. Archdale, in "Remarks on Hospital Treatment of the Acutely Insane", 1909, reference is made to the Important Role of Sepsis in the Mouth, and other parts as the Cause of Mental Disorder.

The author's opinion as to The Relationship between Oral Sepsis and mental disorder is comprised in the statement, "Oral Sepsis Greatly Aggravates Mental Symptoms and calls for urgent treatment, and in some cases it has been the most important cause of insanity."

Among other interesting points in a very instructive paper are the following extracts:

> *"There is one point in connection with Sepsis I wish particularly to emphasise, and that is, that we can certainly have bacterial invasion of a part and the absorption of toxine without any noticeable local signs. For example, we may have bacteriuria and not know it until we examine the urine for bacteria, the resulting cystitis being so slight as to escape notice. Because one is very liable to be misled by reports oh the state of the bowels, and because* ***it is most important to have a full knowledge of the condition of the alimentary canal, I think the physician should himself see the motions daily of every one of the acute cases."***

In 1910, in a paper on "The Systematic Estimation of the Leuco-cytosis in Certain Cases of Insanity: with Special Reference to the Toxaemia Theory", by S. Carlisle Howard, reference is made to his **bacterial examination of the urine and stool of a patient suffering from Mania with confusion; he reported the existence of streptococci in the urine which the serum agglutinated in 20 minutes in a dilution of 1 in 40, the examination of the stools revealing an unusually scanty number of B. coli, the predominating bacteria being streptococci.**

In a short abstract of a paper on "The Toxic Genesis of Contracture" in the Journal, 1913:

> *"Buscano has already expounded the doctrine that contracture consecutive to interruption of the pyramidal bundle, whether in the form of late post-hemiplegia contracture, Little's disease, or spastic paralysis of adults, is peripheral in origin and distinctly toxic in its genesis. He argues that* ***in a paralysed limb there is set up a certain amount of venous stasis, an interference with the normal metabolism, especially in the muscles, and a stagnation of catabolic products."***

In the same journal there are given the results of a "Bacteriological Examination of the Urine in Some Cases of General Paralysis," by E. Barton White.

There occurs the following interesting note:

> *"In collecting a large number of samples of urine from the insane under strictly sterile conditions for another purpose, I have been struck by the frequency with which bacteria occurred in them, chiefly in the case of general paralytics, and this circumstance has led me to investigate the urine of patients suffering from general paralysis somewhat more fully.* ***It seems that in the majority of cases these organisms may be borne by the blood-stream either from some infected focus or possibly from the alimentary canal."***

In a paper on "Some Mental Cases with Endocrine Consideration", by Guy P. A. Prior, MRCS, many useful points are considered as to the influence of toxaemic conditions on insufficiency of the endocrine glands, notably the thyroid and adrenal glands. In his Presidential Address on "The Mechanism of Involuntary Melancholia" at the Annual Meeting of 1920, W. F. Menzies brought out many points of interest:

> ***"In states of Depression occurring at the involutionary period A Most Important Factor Is Excessive Putrefaction In The Intestine";*** *and again in a general reference to the pathological anatomy of the Gastro-Intestinal Tract there is the following:* ***"Asylum cases show a jejunum and ileum shrunken in diameter or length, although the colon is often much enlarged and the wall atrophic and even translucent."***

This statement is specially interesting and instructive as being the only one that I have found in the literature bearing on an important point to which attention was drawn by the late Dr Wilson and the writer in 1903. Interesting collateral evidence bearing on Toxaemia is supplied in a paper on "The Significance of Acidosis in Certain Mental Disorders", B. H. Shaw, 1920.

It pointed out that:

> *"Acidosis has been present in 10 out of 25 of the past admissions, and the mental disorder in all 10 was of the confusional type.* ***In cases which recovered it is noteworthy that the improvement synchronises with diminishing acidosis."***

The concluding reference is to the interesting and suggestive work of Ford Robertson recorded in his recent book on Therapeutic Immunisation.

In this work the author refers to the frequency with which, more especially in acute disorders, there exists a condition of Bacteriuria, and a pathological state of the Intestinal Flora, his observations leading him to conclude that a much larger number of cases of Acute Insanity than is at present dreamt of owe their origin largely to an acute infection. These extracts from the transactions of the Medico-Psychological Association of Great Britain and Ireland of the past 20 years demonstrate fairly conclusively that alienists in this country fully recognise the possibility, and indeed the probability, that **in the development of many forms of mental disorder the introduction into the system of some toxic or infective agent from one or other of the free mucous surfaces of the body plays a much more important part than we realise. The American Journal of the Medical Sciences, September, 1922, Dr Cotton's paper on " Infection of the Gastro-intestinal Tract in Relation to Systemic Disorders."**

He writes:

> ***"The so-called functional psychoses we believe today to be due to a combination of many factors, but the most constant one is the intra-cerebral, biochemical and cellular disturbance arising from circulatory toxins originating in chronic foci of infection situated anywhere throughout the body, and probably secondary disturbances of the endocrine system. The psychoses, then, instead of being considered as a disease entity, should be considered as a symptom, and often a terminal symptom, of a long-continued Masked Infection, the Toxaemia of which acts directly on the brain.*** *Results of the work: We have outlined above our theories regarding the causation of the so-called functional psychoses. We realise that many theories have been advanced in the last 50 years regarding this subject, but we also want to state that during this time the recovery-rate of State institutions has materially diminished. If then we advanced merely a new theory and could not show that the application of such a theory had had unusual results on our patients, we should then be classed with the theorists and our work considered interesting if true. However, we feel we have substantial grounds for considering that the application of these theories has produced results which, as Meyer states: "appear to have brought out palpable results not attained by any previous or contemporary attack on the grave problem of mental disorder." We will confine our statistics to the so-called functional group, which includes: Dementia Praecox, Manic-Depressive Insanity, Paranoid conditions and the psychoneuroses. In this group, as a whole, for a 10 year*

> *period prior to 1918 the recovery-rate was only 37%, of the admissions. Since 1918 the recovery-rate has averaged nearly 70%, in the same group. Of 380 cases classified in this group in 1918, only 50 today remain in the hospital and 9 of these are criminals. A recent survey made of these 380 patients discharged in 1918 shows that after 3 years, with few exceptions, they are today normal in every respect. Over 1,000 patients have been successfully treated in the last 3 years, and it is gratifying to note that the proportion of readmissions to the State Hospital at Trenton has not increased during this time, and that many of the readmissions are cases that were admitted the first time prior to this period of intensive treatment. Our failures have been confined to the patients with a psychosis of over 2 years duration. The cause for such failures we consider is due to the fact that the brain has become permanently damaged, and no amount of elimination of such infection has any effect upon the psychosis."*

- Dr Chalmers Watson, MD, FRCP, Physician, Royal Infirmary, Edinburgh in "Journal of Mental Sciences", October 1923.

> ***"Experience has shown that Auto-Intoxication is a factor in so-called Mental Disease. Many cases in State hospitals, supposed to be Insane, should be placed in general hospitals as cases of Auto-Intoxication for active treatment. Auto-Intoxication is a Poisoning of the System, produced by Disturbed Metabolism, and Auto-Infection is due to the bodily presence of some form of bacterial life, the symptoms representing part of a General Toxaemia."*** *- Dr C. Spencer Kinney, MD, in "Auto-Intoxication, Overstrain, Exercise and Bathing", 1905.*

The Gastro-Intestinal Tract

"The author found involvement of the stomach, duodenum or lower intestinal tract as also with that of either the teeth or the tonsils or both in 50% of the cases. Dr Cotton concurs with Dr Draher as to the importance of the duodenum as a source of absorption of toxic products. It is equally clear that so long as the bacteriological aspect of mouth infection remains unsolved, this custom of destroying the masticating apparatus of the race will continue.

Dr Anders admits that many and varied morbid medical conditions may be oral in origin, as for example: Arthritis, Endocarditis, Pericarditis, Myocarditis, Myositis, Gastritis, Gastric Ulcer, Myocardial Degeneration, Arterial Fibrosis, Chronic Nephritis, Exophthalmic Goitre, and many others. Furthermore foci elsewhere in the body than the teeth are quite as likely to cause disseminated infection as disease of the masticating organs.

It is possible to demonstrate the same micro-organisms in pulpless teeth and in arthritic joints." - Dr William W. Root, MD, in "The State Hospital Quarterly", New York, November 1920.

Bidirectional link
Between the Brain, Gut and Microbiome

“The Growing Amount of Evidence Substantiating this Link: Between the Brain, Gut and Microbiome.

This Review Demonstrates: **The Importance of a Healthy Microbiome, particularly the Gut Microbiota, for patients suffering from Anxiety and Depression; as Dysbiosis and Inflammation in the Central Nervous System have been linked as potential Causes of Mental Illness.**

Studies have shown that Probiotics effectively mitigated Anxiety and Depressive symptoms.” - in “Gut Microbiota’s Effect on Mental Health: The Gut-Brain Axis”, Clinics and Practice, 15 September 2017.

The Following Chapter is Chapter 14 of the Book: “Colon Hydropathy The Clinical Evidence and The Health Conditions That Helps To Resolve”, 2021.

Chapter 35

Organ Axis
Organ Cross-Talk
Organ Interaction Networks

Biological Communication Systems

Organ Interaction Networks are Biological Communication Systems;

That Transfer Information:

a. Within Organisms.
b. Between Organisms.

To:

1. Regulate Functions.
2. Coordinate Activities.
3. Respond to Environmental Stimuli.

These 3 Functions: Describe The Fundamental Purpose of the;

a. Nervous System.
b. Endocrine System.

The Nervous and Endocrine Systems: form a Highly Integrated Neuro-Endocrine System; to ensure the body's survival, and to maintain internal stability (Homeostasis). These Systems (Nervous and Endocrine) Work Together; through Constant Bidirectional Communication; To Maintain Homeostasis (the active process by which organisms maintain a stable, balanced internal environment; such as Temperature, pH [the body's pH to function optimally, internal environment, the blood; must maintain a slightly Alkaline Acid-Base balance between 7.35 and 7.45], and Nutrient Levels). It is essential for survival, as it ensures optimal conditions for cellular function, enzyme activity, and overall health.

Biochemical Reactions Dynamic Equilibrium

"The Body's Functions: Beginning at the Cellular Level; operate as to not deviate from a narrow range of Internal Balance, a state known as Dynamic Equilibrium; despite changes in the external environment.

Extracellular Fluid

Those Changes in the External Environment Alter the Composition of the Extracellular Fluid Surrounding the Individual Cells of the Body.

A narrow range must be maintained; to Stave off the Death of:

1. Cells.
2. Tissues.
3. Organs.

Cellular Level Biochemical Reactions

On the Cellular Level: Homeostasis is observable in the Biochemical Reactions that take place.

Regulation of:

1. Ion concentrations; pH (Hydrogen Ion concentration, where each whole pH unit represents a tenfold change in acidity).
2. Temperature.
3. Oxygen.
4. Blood Glucose Concentration.

Is necessary for Enzymes to function optimally in the environment of the cell, and the formation of Waste Products Must Be Kept In Control As Not To Disrupt the internal environment of the cells. The Cell Will Remain Alive as Long as the Internal Environment Is Favourable.

Homeostasis Underlies All Disease Processes

The principle that a cell remains alive as long as its internal environment is favourable stems from the foundational biological concept of homeostasis and the pioneering work of French physiologist Claude Bernard. Bernard established that the survival of living cells depends on the stability of their immediate surroundings; the: Extracellular Fluid; or "Milieu Intérieur". The Goal of the Health Care Provider; Must Be To Restabilise the "Internal Milieu" of the body; without causing further harm, and; to do so promptly, to avoid the death of cells from dysregulation; and irreparable failure of organ systems." - in "Physiology, Homeostasis", StatPearls, 1 May 2023.

Organ Interaction Network: Biochemical Signals and Neural pathways

"The Organ Interaction Network; operates across multiple levels, using:

1. Biochemical Signals; by Chemical Molecules (specifically Hormones, Peptides, and Metabolites), which are the Fundamental Signaling Agents; and metabolic intermediates regulating Physiological Processes such as:

a. Growth.
b. Metabolism.
c. Homeostasis.

2. Neural Pathways; by Electrical Impulses, and Physical Signals.

These Biochemical Signals, and Neural pathways; enable everything from intracellular operations to complex societal interactions, through which; All Organs Coordinate.

An "Organ" refers to "Collection of Tissues Joined in a Structural Unit"; to Serve a Common Function.

Organ Cross-Talk

Organ Cross-Talk refers to: Biological Communication and Feedback Between Different Organs.

Is Mediated by: Mechanical, Soluble, and Cellular Mechanisms; which are essential for maintaining body Homeostasis; but can result in functional and structural dysfunction in other organs when pathological states occur in one or more organs. Organ Cross-Talk; Highlights the Significance of the Permanent Inter-Organ Collaboration.

Organ Connections - Dysfunction In One Organ Precipitates Failure In The Other

Example 1: In Pulmonary Heart Disease, Chronic Lung Pathology; increases right ventricular afterload, leading to Heart Failure, exemplifying the Lung–Heart Axis's Pathological Interaction.

Example 2: In Hepatorenal Syndrome, **Liver Dysfunction; disrupts Renal Filtration through Inflammatory Mediators, and Metabolic Toxicity, emphasising the Liver–Kidney Cross-Talk; Bidirectional and intricate Pathophysiological Relationship; where Dysfunction In One Organ Often Precipitates Failure In The Other.**

Vicious Cycle of Multi-Organ Injury

Communication is Maintained Through a Combination of Shared:

1. Inflammatory Signaling.
2. Hemodynamic Changes.
3. Metabolic Disturbances.

When dysregulated, create a: "Vicious Cycle" of Multi-Organ Injury.

Research has illuminated Organ Connections; such as the Gut–Brain Axis; which regulates Emotion and Cognition (memory, perception, etc.); via the Vagus Nerve, and Microbial Metabolites.

The Gut–Liver–Brain Axis: 3-Way Interaction System

The Gut–Liver–Brain Axis exemplifies a 3-Way Interaction System; in which the Gastrointestinal Tract, the Liver, and Nervous System communicate through:

1. Gut Microbial Metabolites (bioactive compounds are produced when gut bacteria ferment dietary fibres, proteins, and polyphenols).
2. Immune Responses (the body's defence mechanism it includes physical barriers: skin; inflammation; and the action of white blood cells: phagocytes, lymphocytes)
3. Neural Signalling (Information sent through the nervous system in the form of electrical impulses).

These Influence Both Metabolic Homeostasis, and Neurological Health.

Inter-Organ Interactions

The Inter-Organ Interactions: Are Essential for Maintaining Physiological Balance, and General Health Status, with Networks Involving 3, Or More Organs." - in "Organ Cross-Talk: Molecular Mechanisms, Biological Functions, and Therapeutic interventions for diseases", Signal Transduction and Targeted Therapy, 6 January 2026.

Gut - Entire Gastrointestinal
Intestine - Small and Large Colon

Interconnected Physiological Networks: Bidirectional, Multi-Way Axes

The Body is composed of "Organ Systems", **all these "Organ Systems" Are "Connected Bidirectionally"** by **"Bidirectional Axes": Are "Interconnected Physiological Networks" that facilitate constant 2-Way Communication between the Central Nervous System and Peripheral Organs.**

These "Axes" including the; "Gut–Brain", "Bone–Brain", and "Brain–Body" Networks; **are Not Linear Pathways;** but rather Integrated Systems; that Maintain Homeostasis Through: Neural, Chemical, and Immune Signals.

Organs Don't Function In Isolation

"Network Physiology" or "Organ Cross-Talk": **Organ Systems Don't Function In Isolation; They Continuously Communicate Through: Neural, Hormonal, and Physical Feedback Mechanisms to Maintain Homeostasis.**

Bidirectional, Multi-Way Axes Operate through Parallel:

1. Biochemical Communication Networks; Endocrine and Immune Pathways to Regulate Homeostasis.
2. Neural Communication Networks; Neural Pathways to Regulate Homeostasis, with the Vagus Nerve, serving as a Primary Highway for Messages.

These Communication Systems; feature Bidirectional, Multi-Way Axes; are **Interconnected Networks that allow different Organs, Systems, and Microorganisms to Exchange Information**.

The Microbiota-Gut-Brain Axis

The Microbiota-Gut-Brain Axis is a Prominent Example, it integrates the:

1. Enteric Nervous System.
2. Central Nervous System.
3. Microbiome.

Communication Networks Maintain Physiological Homeostasis

"Bidirectional Axes between Organs and Systems ("Organ Cross-Talk"; "Organ-Organ Axes" or "Network Physiology"), are a Fundamental Communication Network; that Maintains Physiological Homeostasis, and Mediates Responses to Stress; managing both the immediate "fight-or-flight" reaction; a survival mechanism that releases Adrenaline and Cortisol to handle immediate threats; but chronic activation due to modern stressors (like work pressure or financial worry);

may lead to persistent, harmful physiological states.

This Sustained Stress can lead to:

1. Persistent Exhaustion (Severe Burnout).
2. Mental Fatigue.
3. Long-Term Health Issues:

a. Cardiovascular Disease.
b. Anxiety.
c. Depression.

These Pathways (Bidirectional Axes); Allow Remote Tissues; to Biochemically and Physically Communicate one with another.”

Brain-Body Axis

Brain-Body Axis: is a Multi Way signaling between the Brain, and Peripheral Systems (Musculoskeletal, and Immune Systems).

Brain-Adipocyte Axis

The Brain-Adipocyte Axis is a Bidirectional Communication Network; where the Central Nervous System and Adipose Tissue (Fat) Interact to regulate:

1. Energy Balance.
2. Metabolism.
3. Inflammation.

Adipocytes (Fat Cells): Are the primary cells in Adipose Tissue; that store energy as triglycerides, and act as crucial metabolic regulators.

1. Maintain Energy Homeostasis.
2. Secrete Hormones (Leptin, Adiponectin).
3. Insulate the Body.

Adipocytes Cells

The 2 Main Types of Adipocytes Cells:

1. White Adipocytes (long-term energy storage).
2. Brown Adipocytes (thermogenic, heat-generating fat).

The Brain controls Fat Function via the Sympathetic Nervous System, while Adipocytes release signaling molecules (Adipokines); that inform the Brain about energy status, with Dysfunction contributing to Neuro-Inflammation.

Brain-Bone Axis

"The Brain is the core of the Central Nervous System, it Regulates the Functions of the Major Organs of the Body, Maintaining Homeostatic Balance.

There Is An Inter-Dependence Between the Brain and Other Organs.

Skeletal Homeostasis

The Skeletal System serves as the fundamental supportive, and protective framework of the human body; and is Extensively Innervated by Nerves.

A Large Body of Experimental Evidence; confirms the Close Interplay Between: Bones and the Brain.

The Brain Can Influence Skeletal Homeostasis; through modulation of:

1. Neuromolecules.
2. Extracellular Vesicles.
3. Brain-Marrow Neural Circuit.

Conversely, the Skeleton Can Influence the Brain in its:

1. Development.
2. Function.
3. Pathology.

By:

1. Physical Exercise.
2. Massage Therapy.
3. Skeletal Trauma.

Peripheral Hormones

Peripheral Hormones, such as:

1. Insulin
2. Leptin
3. Thyroid Hormones
4. Sex Steroid Hormones.

These Hormones are known to cross the Blood-Brain Barrier, and Regulate Brain Development, while Modulating multiple aspects of Cognitive Function.

Conversely; **Changes in Hormone levels; can affect the Regulatory Functions of the Central Nervous System.**

Profound Link Between The Brain And Bone

Bones fulfil a Dual Purpose in the human body: serving as Supportive and Protective Structures, and performing a range of Physiological Functions.

Mechanically, Bones provide stability and structure, while also; participating in:

1. Hematopoiesis (continuous producing New Blood Cells: Red Cells, White Cells, and Platelets; from hematopoietic stem cells; occurring in the Red Bone Marrow; this process replenishes billions of blood cells daily to ensure:

a. Oxygen Transport.
b. Immune Defence.
c. Clotting).

2. Endocrinology: The Endocrine Glands; such as the:

a. Pituitary.
b. Thyroid.
c. Adrenals.

Function as the body's primary Chemical Regulation System; secreting Hormones directly into the Bloodstream to Act as Messengers.

These Hormones Travel throughout the Body to Regulate:

a. Metabolism.
b. Growth and Development.
c. Reproduction.
d. Sleep.
e. Mood).

3. Metabolism.

4. Calcium Ion Storage.

Bones Are Highly Innervated; indicating a Profound Interconnection Between the Nervous System and Bone tissue. This intricate relationship underscores The Importance of Bones in Maintaining the integrity, and functionality of the human body. Studies have established a Profound Link Between the Brain and Bone.

Neurotransmitters

The Brain influences Bone Homeostasis and Regeneration through Neurotransmitters. Neurotransmitters released by the Brain can modulate the activity of Osteoblasts, which affects bone growth, development, and fracture repair.

Osteoblasts

Osteoblasts are specialized, bone-forming cells responsible for synthesizing and mineralizing bone matrix during skeletal development, remodeling, and repair.

Derived from mesenchymal stem cells, these cells deposit collagen and proteins (osteoid) that later harden into mature bone tissue. Osteoblasts work in constant harmony with osteoclasts (which resorb bone) to maintain bone strength and homeostasis.

Central Nervous System

The Central Nervous System is essential for coordinating Homeostasis in the human body. **Experimental evidence has confirmed the Bidirectional Regulatory Relationship between the: Skeletal and Nervous Systems.**

The Central Nervous System Comprises:

1. Brain.
2. Spinal Cord.
3. Peripheral Nerves.

Transmits information through synapses between Neurons; to achieve direct innervation of peripheral tissues.

This system has the important task of receiving incoming information from all parts of the body, integrating and processing this information into coordinated motor efferent signals; or storing it as a neural basis for learning and memory.

The Central Nervous System; through the Hypothalamus (a Neuroendocrine Center), releases and coordinates a series of regulatory mediators to coordinate the activities of various parts of the body. These regulatory mediators are expressed by the Hypothalamic Nucleus and transported to the Posterior Pituitary Gland; or stimulate the release of hormones from the Anterior Pituitary Gland.

This process demonstrates the sophisticated regulatory mechanisms of the Central Nervous System in the body, ensuring the coordinated functioning of all parts of the body.

Growth Hormone

Growth Hormone: is a Peptide Hormone secreted by the Anterior Pituitary Gland of the human body; that promotes:

1. Skeletal.
2. Visceral.
3. Systemic Growth.

Stimulates:
Protein Synthesis.

Influences:
Fat and Mineral Metabolism, and plays a key role in Human Growth and Development.

There are direct and indirect effects of Growth Hormone on Bone development, resulting in increased rates of Bone formation and resorption.

Brain-Marrow Neural Circuit

There is a growing body of evidence supporting the close connection between the Brain and Bone Marrow. This connection is mediated by both direct innervation effects of the Central Nervous System and modulation by Neuro-Endocrine Mechanisms." - in "The Brain-Bone Axis: investigating the interaction between the central nervous system and skeletal Homeostasis", Medicine Plus, December 2025.

Growth Hormone and Central Nervous System

Human Growth Hormone, or Somatotropin, is a protein produced by the Pituitary Gland that stimulates growth, cell reproduction, and regeneration. It regulates metabolism, body composition, and tissue repair. Growth Hormone acts on the Central Nervous System as a Neurotrophin, promoting neuroprotection, neurite growth, and synaptogenesis, particularly after neural injury. Growth Hormone receptors are present in key areas like the cerebral cortex, hippocampus, and hypothalamus, influencing neurogenesis, memory, and cognitive function.

Key Aspects of Growth Hormone in the Central Nervous System:

1. Neuroprotection: Growth Hormone supports neuron survival and helps repair damage, particularly following Ischaemic Incidents; "mini-stroke" temporary blockage of blood flow to the brain, causing sudden, stroke-like symptoms).

2. Neurogenesis & Growth: It stimulates the proliferation of neural precursors and glial cells, aiding in brain development and remodelling.

3. Cognitive Function: Studies suggest **Growth Hormone plays a role in regulating: Memory, Emotion, and Behaviour.**

Gut–Bone–Brain Axis

"Patients with "Intestinal Diseases" carry a substantial "Multisystem Co-Morbidity Burden"; involving the "Gut–Bone–Brain Axis."

Nutritional Metabolism and Disruptions in Bone Metabolism

Disordered Nutritional Metabolism: Is an Important Contributor to Abnormalities in Bone Metabolism.

In Patients with Irritable Bowel Disease:

1. **Nutritional Insufficiency;**
2. **Inadequate Vitamin D,**
3. **Calcium Intake or Absorption;**

Is common.

Vitamin D, plays an Essential Role in Calcium Absorption, and Bone Mineralisation.

Insufficient Vitamin D: Not only Diminishes Osteoblast (mesenchymal cells responsible for bone formation and remodelling) activity; but Also Suppresses Bone Formation; thereby increasing fracture risk, and exacerbating inflammation-associated skeletal deterioration.

Inadequate Calcium intake triggers compensatory bone resorption to maintain serum calcium levels, further contributing to bone loss.

Obesity Is Closely Associated with Chronic Inflammation.

To improve bone health in patients with Irritable Bowel Disease, increasing attention has been directed toward Dietary Interventions: Aimed at Restoring Gut Microbial Homeostasis.

Increasing the intake of Calcium, Vitamin D, and high-quality protein contributes to improved Bone Mineral Density and preservation of skeletal integrity.

Calcium Carbonate, Vitamin D and Magnesium

Calcium Carbonate, Vitamin D and Magnesium it support:

1. **Bone Health.**
2. **Muscle Function.**
3. **Calcium Absorption.**

Calcium Carbonate provides high elemental Calcium; while Vitamin D, aids its absorption; and Magnesium helps balance Calcium levels, and Metabolise Vitamin D.

This Combination is used to Maintain Healthy:

1. **Bones.**
2. **Teeth.**
3. **Muscles.**

"Vitamin D is Essential for the body To Absorb Calcium; this process relies heavily on Magnesium which is required to activate Vitamin D; in the Liver and Kidneys. Without sufficient Magnesium, Vitamin D cannot function optimally, leading to poor Calcium Absorption, and potential health risks.

Gut Microbiota Dysbiosis

Gut Microbiota Dysbiosis: Is Associated with a Range of Neurological, and Psychiatric Disorders:

1. **Depression.**
2. **Anxiety.**
3. **Alzheimer's Disease.**
4. **Parkinson's Disease.**
5. **Neurodegenerative Conditions.**

Alterations in the Composition of the Gut Microbiota; can influence Brain Health through multiple mechanisms. Dysbiosis may Increase Intestinal Permeability "Leaky Gut", allowing Bacterial Components such as Lipopolysaccharides (Endotoxins, large amphipathic molecules found in the outer membrane of Gram-negative bacteria) to enter the circulation, where; They Trigger Systemic Inflammation, and Promote Neuro-Inflammatory Responses. Maintaining Gut Microbial Homeostasis; not only helps Prevent the onset of Neurodegenerative Diseases; but hold Therapeutic Potential for Improving Mood Disorders, and Cognitive Impairment.

Immune mechanisms of the Brain–Bone–Gut Axis

The Brain–Bone–Gut Axis: Plays a critical role in the Regulation of Immune Responses, with its core mechanisms involving Multilayered Interactions among the:

1. Gut Microbiota.
2. Immune System.
3. Central Nervous System.

As a Key Regulatory component of this Network, the Gut Microbiota Can Indirectly Influence both Brain and Skeletal health; by modulating systemic

inflammation, and immune cell function. The Gut, serving as the Primary Interface between the Host and its Resident Microorganisms; Is Particularly Sensitive to Alterations in Microbial Composition.

Dysbiosis Can Increase Intestinal Permeability

Dysbiosis Can Increase Intestinal Permeability "Leaky Gut", allowing pro-inflammatory cytokines; such as Tumour Necrosis factor-α and Interleukin-6; and Bacterial Metabolites to enter the circulation, thereby triggering neuro-inflammation or disrupting bone metabolism.

Microbial metabolites provide; a mechanistic, molecular-level basis for communication along the Gut–Immune–Brain-Bone Axis.

Vagus Nerve Primary Pathway Between Gut and Brain

The Vagus Nerve: Is the Primary Communication Pathway; Between the Gut and the Brain; it conveys information about the state of Gut Health to the Central Nervous System; and indirectly influences Bone Metabolism.

Neuro-Immune-Skeletal Interplay

This Neuro-Immune-Skeletal Interplay; forms a fundamental physiological basis of the Brain-Bone-Gut Axis, resulting in a highly integrated coupling of:

1. Gut Health.
2. Immune Homeostasis.
3. Bone Function.

The Gut Microbiota

The Gut Microbiota Is Essential for Human Health; it participates in the Production of various Gastrointestinal Hormones, Short-Chain Fatty Acids (fatty acids produced when beneficial gut bacteria ferment dietary fiber in the colon; acting as crucial energy sources for gut cells; promoting anti-inflammatory health), and Vitamins absorption and metabolism.

Disruption of a Healthy Gut Microbiota can lead to Inflammation

The Brain–Bone–Gut Axis: Provides an integrated framework for understanding the interconnected relationships among:

1. Mental Health.
2. Skeletal Diseases.
3. Gut Function.

The Multisystem co-morbidities involving the:

1. Nervous System.
2. Skeletal System.
3. Gut Microbiota.

The Central Nervous System Regulates Bone Remodeling through:

1. Neurotransmitters.
2. Neuropeptides.
3. Hormones.

Bone-Derived Hormones, in turn, Influence:

1. Cognition
2. Emotional States." - in "The Brain–Bone–Gut Axis: A Microbial Bridge Underlying Multisystem Comorbidities", Frontiers in Endocrinology, 26 February 2026.

Bone Marrow-Brain Axis

The Bone Marrow-Brain Axis (Bidirectional Communication Network):

1. Central Nervous System Regulates Bone Marrow function.
2. Bone Marrow Cells, and Bone-Derived Factors; Influence Neurological Health and Repair.

This Crosstalk Utilises:

1. Immune.
2. Endocrine.
3. Neural Pathways.

To Manage:

1. Inflammation.
2. Cognitive Function.
3. Tissue Regeneration.

Connection Between Brain and Bone Marrow

1. Immune & Inflammatory Signaling; Chronic Brain injuries or neurodegenerative conditions can alter Bone Marrow Cells; which may then independently drive Neurological Dysfunction. Conversely; Bone Marrow-Derived Cells, and Pro-Inflammatory Signals Can Affect Brain Inflammation.

2. Neural Regulation: The Brain influences Bone Marrow, and Bone Metabolism through the Sympathetic Nervous System; and Hypothalamic Neuropeptides.

3. Molecular Messengers: Bone-Derived Factors (Osteocalcin, and others) can cross the Blood-Brain Barrier to modulate:

a. Memory.
b. Mood.
c. Cognitive Processes.

Regenerative Potential

Bone Marrow Mesenchymal Stem Cells (adult multipotent stem cells found within the bone marrow stroma):
Have the ability to repair damaged neural tissue.
And are Capable of: Self-Renewal; and Differentiation Into Connective Tissues like:

1. Bone.
2. Cartilage.
3. Fat.

Bone Marrow Mesenchymal Stem Cells are crucial for regenerative health, repairing tissue damage, and support blood-producing Hematopoietic Cells (immature, multipotent cells found in the bone marrow and blood that self-renew and differentiate into all mature blood cell types, including red blood cells, platelets, and white blood cells; they are crucial for lifelong blood production and immune system function).

Liver-Organ Axes

Liver-Organ Axes: Bidirectional Communication System; Between the Liver and other Organs;

Regulating:

1. Metabolism.
2. Immunity.

Through:

1. Hepatokines.
2. Cytokines.
3. Metabolites.

Maintaining:

a. Metabolic Homeostasis.
b. Immune regulation.

Organ Axes are critical for maintaining systemic Homeostasis; and are Affected in Disease Development. The liver is the body's primary blood filter and the largest lymph-producing organ. It filters toxins and waste from the blood while producing significant amounts of lymph fluid; the Lymphatic System then filters this fluid through lymph nodes to remove bacteria before returning it to the blood.

Due to its Function the Liver Acts as a "Biological Firewall"; Screening:

1. Nutrients.
2. Toxins.
3. Microbes from the Blood Stream.

The Liver acts as the body's metabolic control center.

Processes nutrient-rich blood from the digestive tract; converting food into usable energy; storing vital vitamins and minerals; regulating blood sugar; and neutralizing toxins before they can circulate into the rest of the circulatory system.

Liver-Lung Axis

The Liver-Lung Axis (Bidirectional Communication System); where **Liver and Lung State of Health Are INTERDEPENDENT**; primarily mediated by systemic inflammation, immune cell trafficking, and circulating mediators. **Liver Disease Commonly Impacts the Lungs; through a "Liver-Lung Axis", where advanced Liver Dysfunction Leads to Pulmonary Complications;** most notably: Hepatopulmonary Syndrome; which causes Low Blood Oxygen due to dilated blood vessels in the lungs.

Liver-Heart Axis

The Liver-Heart Axis: Bidirectional Connection Network; where **Dysfunction In One Organ Drives Damage In The Other Through:**

1. Metabolic Pathway.
2. Inflammatory Pathway.
3. Hemodynamic pathway.

Metabolic Dysfunction-Associated Steatotic Liver Disease; contributes to Cardiovascular Risk.

Heart Failure causes Congestive Hepatopathy and Liver Fibrosis; Creating a Vicious Cycle.

Liver-Brain Axis

The Liver-Brain Axis: Bidirectional Communication Network; link the Liver and Brain via:

1. Neural (Vagus Nerve).
2. Humoral (hormones).
3. Immune Pathways.

To Maintain Metabolic Homeostasis.
It regulates behaviours such as: Eating.

The Brain Influences:

1. Hepatic Glucose.
2. Lipid Metabolism.

Dysregulation, often involving Gut Microbiota and Inflammation; can cause:

I. Hepatic encephalopathy (a serious brain dysfunction in advanced liver disease; or acute liver failure; where the liver cannot remove toxins (primarily ammonia) from the blood.

Symptoms range from:

1. Mild Confusion.
2. Sleep Disturbances.
3. Severe Disorientation.
4. Personality Changes.
Coma [hepatic coma];

It is managed by Reducing Neurotoxins);

II. Cognitive Impairment.

Liver-Spleen Axis

The Liver-Spleen Axis: Bidirectional Vascularly Linked Pathway (via the portal vein).

The Spleen acts as an immune sentinel, influencing:

1. Hepatic inflammation.
2. Fibrosis.
3. Regeneration.

Through the release of:

a. Cytokines.
b. Immune Cells.

It acts as a critical link between:

1. Immunity
2. Infection
3. Metabolism
4. Liver disease progression (particularly in Metabolic Dysfunction-Associated Steatotic Liver Disease).

Liver-Kidney Axis

The Liver-Kidney Axis (Bidirectional Communication Pathway): Where Liver Disease (Fatty Liver), and Kidney Disease exacerbate each other; often mediated by the Gut Microbiota, Inflammation, and Metabolic Dysfunction.

Dysfunction In One Organ; Triggers:

1. Inflammation.
2. Systemic Oxidative Stress.
3. Accumulation of Toxic Metabolites.

That Damage The Other.

Liver-Pancreas Axis

The Liver-Pancreas Axis: Critical Bidirectional Communication Pathway; managing metabolic Homeostasis; where Liver Dysfunction leads to Pancreatic Injury; and Vice-Versa. This Axis involves direct signaling via the Portal Vein, nutrient regulation (insulin/glucagon), and bile-driven digestion. Key Interactions include Metabolic Disorders like Diabetes; Accelerating Liver Disease; while Hepatitis increases the risk of Pancreatic Dysfunction.

Liver-Bone Axis

The Liver-Bone Axis: Bidirectional Communication System; where Liver health Influences Bone Metabolism, and Vice-Versa; largely mediated by:

1. Hepatokines: bioactive, hormone-like proteins secreted by hepatocytes that act as signalling molecules to regulate metabolism, energy balance, and inflammation in tissues. Acting as a crucial communication link between the liver and other organs (e.g., adipose tissue, brain, muscle), they are key factors in metabolic disorders, including type 2 diabetes; non-alcoholic fatty liver disease.

2. Cytokines: small signaling proteins that act as chemical messengers in the immune system, controlling inflammation, cell growth, and immune responses to infections. They are produced by various cells, mainly white blood cells, to coordinate defense mechanisms.

3. Metabolic Signaling: network of communication that allows cells to monitor nutrient levels, energy status, and metabolic intermediates to regulate essential functions like protein synthesis, autophagy, and growth. Key signaling pathways; integrate these signals to maintain homeostasis and adjust to metabolic changes.

Chronic Liver Diseases:

a. Fatty Liver Disease.
b. Cirrhosis.
c. Hepatitis.

Can lead to Secondary Bone Loss (Hepatic Osteodystrophy), due to metabolic imbalances; and inflammatory cytokines; increasing risks of osteoporosis.

Liver-Gut Axis

The Liver-Gut Axis: Bidirectional Communication System between the Liver and the Gastrointestinal Tract, connected via the portal venous system. It allows Gut-derived products; including metabolites, bacteria, and toxins; to influence Liver health; while the Liver provides feedback via bile acids and antibodies. **The Liver-Gut Axis; Anatomical and Functional Relationship Between the Intestine (and its Microbiome), and the Liver; are linked by the Portal Vein. The Liver receives Blood-Borne Products from the Gut; while it supplies Bile and Antibodies to the Intestines. Disruption of this Axis (increased gut permeability "leaky gut"), contributes to liver Diseases:**

1. Metabolic Dysfunction-Associated Steatotic Liver Disease.
2. Alcohol-related Liver Disease.
3. Cirrhosis.

Liver-Thyroid Axis

The Liver-Thyroid Axis: Critical Bidirectional Relationship; where Thyroid Hormones (T3/T4) regulate Hepatic Metabolism; while the Liver acts as a key site for Thyroid Hormone Activation (T4 to T3 conversion), and Metabolism.

Thyroid Hormones drive hepatic lipid, and glucose metabolism.

Impaired Liver Functioning leads to: Liver Dysfunction; when the Liver can no longer adequately perform its essential roles; such as filtering toxins, aiding digestion, and producing clotting factors; resulting in damage; that may progress from inflammation to cirrhosis or acute failure.

When the Liver is damaged, it often results in the build-up of toxins (such as ammonia) in the blood, leading to severe complications like:

1. Hepatic Encephalopathy (Brain Dysfunction).
2. Jaundice (yellowing of the skin; and whites of the eyes; due to high levels of bilirubin, a waste product in the blood).
3. Fluid Accumulation (Oedema).

Liver-Circulatory Axis

The Liver-Circulatory Axis is a unique, dual-supply, high-volume system receiving ~25% of cardiac output.

It consists of the portal vein (75% flow, nutrient-rich/oxygen-poor), and hepatic artery (25% flow, Oxygen-rich).

Blood mixes in hepatic sinusoids, processed by hepatocytes, then exits via hepatic veins into the inferior vena cava.

Liver-Vasomotor Axis

The Liver Vasomotor Axis: Bidirectional Relationship between Liver Function, Blood Flow Regulation (Vasomotor Activity), and Metabolic Health; particularly in the context of Menopausal Vasomotor Symptoms, and metabolic syndrome.

Menopause Connection:

Moderate-to-Severe Vasomotor Symptoms (Hot Flashes / Night Sweats) are Closely Associated with an increased risk of Metabolic Dysfunction-Associated Steatotic Liver Disease.

This suggests a Liver-Vasomotor Connection, where Metabolic Dysfunction in the Liver Coincides; with the Vascular Changes Causing Hot Flashes.

Liver-Central Nervous System Axis

The Liver-Central Nervous System Axis: Bidirectional Communication Network connecting the Liver and Brain via neural, humoral, and immune pathways.

It maintains metabolic Homeostasis by transmitting signals regarding nutrient availability, toxins, and inflammation, and its dysfunction is linked to conditions like hepatic encephalopathy, neurodegenerative diseases, and metabolic disorders.

Liver-Lymph Axis

The Liver-Lymph Axis: Is a Critical System responsible for; Producing 25%–50% of the body's total Lymph.

It maintains liver Homeostasis by draining fluid, macromolecules, and immune cells from the sinusoids, via the space of Disse (Disse perisinusoidal space) a microscopic zone in the liver located between the sinusoidal endothelium and hepatocytes.

It contains blood plasma, microvilli, and Hepatic Stellate Cells (Ito cells), facilitating nutrient / waste exchange and Vitamin A storage, it is critical to liver function and fibrogenesis), to the Hilar Lymph Nodes (located at the hilum or root of each lung, where airways and blood vessels enter, acting as immune filters), ultimately returning them to the Bloodstream via the thoracic duct.

Oral–Gut–Liver Axis

The Oral–Gut–Liver Axis: Bidirectional Interconnected System; wherein the:

1. Oral Cavity,
2. Gastrointestinal Tract,
3. Liver;

Communicate through:

a. Microbiota,
b. Microbial Products,
c. Immune-Inflammatory Mechanisms.

Dysbiosis (Imbalance) of the Oral Microbiota; particularly in Periodontitis; can:

a. Drive.
b. Worsen.
c. Accelerate.

The Progression of Chronic Liver Diseases.

Liver-Skin Axis

The Liver-Skin Axis: Bidirectional Communicative Pathway; releases inflammatory cytokines that promote Skin inflammation and keratinocyte proliferation.

The Liver Health Directly influences Skin appearance.
Inflammatory Skin conditions affect Liver function.

Metabolic Dysfunction-Associated Steatotic Liver Disease, where excess fat builds up in the liver; it is Closely Associated with Obesity, Type 2 Diabetes, and Metabolic Syndrome.

Treatment Focuses on Reversing fat Accumulation Through:

1. Weight Loss.
2. Healthy Diet.
3. Increased Physical Activity.

Liver-Muscle Axis

The Liver-Muscle Axis: Bidirectional Communication System where;

1. Liver Dysfunction; Promotes Muscle Wasting; while;

2. Muscle Loss; Accelerates Liver Pathology, largely driven by inflammatory cytokines and metabolic disruption.

Key mechanisms include:

a. Myokine/hepatokine signaling,
b. Nutrient Metabolism Alterations,
c. Potential Gut Dysbiosis (Gut-Liver-Muscle Axis).

Liver-Adipose Axis

The Liver-Adipose Axis: A critical Bidirectional Communication System; managing Energy Homeostasis, where fatty acids, and adipokines; from adipose tissue directly influence Hepatic Metabolism; while the Liver releases factors; to regulate Adipocyte (also known as lipocytes or fat cells) function.

Dysregulation, often caused by Adipose Tissue dysfunction, leads to increased fatty acid flux to the liver.

Causing:

1. Hepatic Steatosis.
2. Inflammation.
3. Insulin resistance.

Liver–Ovary Axis

The Liver–Ovary Axis: Bidirectional Communication Pathway; linking hepatic health with Ovarian Endocrine function; through:

1. Metabolic.
2. Hormonal.
3. Immunological Signals.

It plays a crucial role in women's health, where Liver function influences ovulation and fertility; while ovarian hormones affect hepatic lipid metabolism.

Dysregulation of this Axis is linked to conditions like:

a. Polycystic Ovary Syndrome.
b. Metabolic Dysfunction-Associated Steatotic Liver Disease.

Liver-Testis Axis

The Liver-Testis Axis: Bidirectional Metabolic and Endocrine Pathway; where the Liver regulates testicular function via metabolism and hormone regulation, while the Testis influences liver metabolism through androgens.

This Axis is vital for Xenobiotic-Induced Toxicity, where the Liver bioactivates compounds (e.g., cyclophosphamide) that cause Testicular damage. Dysfunction in this axis, often caused by pollutants, links liver disease to reproductive issues.

Xenobiotic-Induced Toxicity is the adverse biological effects caused by Foreign Chemical Substances; entering the body:

1. Pharmaceuticals.
2. Pesticides.
3. Pollutants.
4. Food Additives.

These compounds are processed by Metabolic Systems, where unintended reactive metabolites can trigger:

a. Oxidative Stress.
b. Mitochondrial dysfunction.
c. Cellular Damage.

Potentially leading to:

I. Chronic Diseases
II. Organ Failure.

Hypothalamic-Pituitary-Gonadal Axis

The Hypothalamic-Pituitary-Gonadal Axis: A critical Neuroendocrine System regulating:

1. Reproduction.
2. Development.
3. Aging.

It functions through a feedback loop where the Hypothalamus releases Gonadotropin-Releasing Hormone; prompting the pituitary to secrete Follicle-Stimulating Hormone and Luteinizing Hormone; which stimulate the gonads (testes/ovaries) to produce sex steroids (testosterone/estrogen); regulating gametogenesis.

The Gonadotropin-Releasing Hormone; Master Hormone produced in the hypothalamus that signals the Pituitary Gland to release Luteinizing Hormone, and Follicle-Stimulating Hormone.

These Hormones Control Reproductive Functions, including:

1. Puberty.
2. Menstrual Cycles.
3. Sperm Production.

Gut-Organ Axes

Gut-Organ Axes: Bidirectional Communication Networks Linking the Gastrointestinal Tract, to Other Body Systems; including the:

1. Brain.
2. Liver.
3. Lungs.
4. Heart.

Via:

a. Neural Pathways (interconnected chains of neurons that transmit signals throughout the nervous system, facilitating sensation, movement, and cognition).
b. Immune Pathways (the release of hormones; the rapid removal of metabolic waste, and cellular debris; a process essential for maintaining systemic homeostasis. When cells undergo stress or death, they produce waste products that must be removed quickly to prevent inflammation and damage to surrounding tissues).
c. Endocrine Pathways (these pathways depend on ductless glands secreting hormones directly into the bloodstream to trigger specific responses in target cells).

The Gut Microbiota plays a crucial role in these networks; where Dysbiosis (Microbial Imbalance) contributes to Disease in Distant Organs.

Neuro-Immuno-Endocrine Axis

The Neuro-Immuno-Endocrine Axis: Bidirectional Communication Network that integrates the:

1. Nervous System: The body's command center. Composed of the Brain, Spinal Cord, and a vast Network of Nerves; it transmits Electrical Signals between the Brain and the rest of the body; to regulate everything from senses to basic reflexes and involuntary functions like breathing and heartbeat.

2. Immune System:
a. Bone Marrow - The spongy tissue inside your bones where all blood cells (including white blood cells) are produced.
b. ILymphatic System - A vast network of vessels and nodes that carry a fluid called lymph. Lymph nodes act as communication and sampling hubs where immune cells gather to intercept pathogens.
c. Thymus - A small organ in your upper chest where specific white blood cells (T cells) mature.
d. Spleen - A organ that filters blood, removing old or damaged cells and trapping infectious agents.

3. Endocrine System: a Network of Glands and Organs; that produce and release hormones directly into the bloodstream. These chemical messengers regulate essential bodily functions, including metabolism, growth, mood, and reproduction, to maintain overall internal balance).

Are profoundly interconnected via bidirectional communication pathways, forming a unified network (Neuro-Immuno-Endocrine Axis) that regulates:

1. Homeostasis.
2. Stress Responses.
3. Metabolism.

These systems communicate through:

1. Neurotransmitters (Neural).
2. Hormones (Endocrine).
3. Cytokines (Immune).

Ensuring Rapid, Coordinated Responses to:

a. Infection.
b. Stress.
c. Injury.

Gut-Brain Axis

The Gut-Brain Axis: Bidirectional Communication System between; the Intestinal Tract, and the Central Nervous System.

Comprising the:

1. Microbiota.
2. Neuro-Endocrine.
3. Neuro-Immune Systems.

Microbiota-Gut-Brain Axis

This explicitly highlights the role of Gut Bacteria in directing communication between the Gut and the Brain, acting as a crucial component of the main Gut-Brain Connection.

The complex interactions between the Gut Microbiota and the host's Immune System; INEVITABLY Affect the Function of Other Organs, creating an "Axis" between them.

Intestinal Disruption; or an Imbalance of the Intestinal Flora; as well as an Impaired Structure and Function of the Gut; along with an Imbalance in Immune Homeostasis; Lead to a range of Intestinal Diseases:

1. Irritable Bowel Disease.
2. Crohn's Disease.
3. Other organ diseases.

Gut-Liver Axis

The Gut-Liver Axis: Bidirectional; Anatomical and Functional Relationship between the Intestine (and its microbiome); and the Liver.

Linked by the portal vein; the Liver receives blood-borne products from the Gut, while it supplies bile; and antibodies to the intestines.

Disruption of this Axis (increased Gut Permeability or Leaky Gut) contributes to Liver Diseases:

1. Metabolic dysfunction-associated steatotic liver disease.
2. Alcohol-related liver disease.
3. Cirrhosis.

Gut-Muscle Axis

The Gut-Muscle Axis: Bidirectional Communication Network; where Gut Microbiota influence:

1. Skeletal muscle health.
2. Growth.
3. Metabolism.

Muscle activity modulates:

1. Gut Bacteria.

Microbial metabolites directly impact muscle function.
While exercise reduces inflammation and improves gut microbial diversity to prevent sarcopenia (loss of muscle mass, strength and physical performance).

Gut-Liver-Muscle Axis

The Gut-Liver-Muscle Axis: Bidirectional Communication System; where Gut Microbiota Dysbiosis, Liver Inflammation, and Metabolic Products (such as bile acids and short-chain fatty acids) interact to regulate muscle protein synthesis and breakdown, often contributing to sarcopenia and malnutrition in chronic liver disease.
This Axis explains how "leaky gut" (increased permeability) leads to bacterial products passing via the portal vein to the liver, causing inflammation that ultimately triggers muscle wasting.

Gut–Kidney Axis

The Gut-Kidney Axis: Bidirectional Communication Pathway; linking the Gut Microbiome to Kidney Function, where Intestinal Microbiota Imbalances (Dysbiosis) produce Uraemic Toxins, that accelerate Kidney Disease.
Reduced Kidney Function leads to Toxic accumulation that harms the gut barrier.

Key aspects include:

1. Inflammation.
2. Uraemic Toxin production.
3. Bacterial translocation (the passage of viable bacteria or their products (such as endotoxins) from the gastrointestinal tract to tissues and organs, such as the mesenteric lymph nodes, liver, spleen, and bloodstream; this process can cause systemic inflammation and sepsis).

Gut-Lung Axis

The Gut-Lung Axis: Bidirectional Communication Network; between the Gastrointestinal Tract and the Lungs, where Gut Microbiota and metabolites influence Respiratory Immune Health.

Dysbiosis in the Gut; can lead to inflammation and disease in the Lungs; through signaling molecules, which regulate immune Homeostasis, linking digestive health directly to respiratory conditions like Asthma.

Gut-Heart Axis

The Gut-Heart Axis: Bidirectional Communication Network; linking Gut Microbiota Health to Cardiovascular Function.

Dysbiosis (Imbalance) in the Gut can lead to:

1. Systemic Inflammation, which increase the risk of;

a. Heart Failure.
b. Atherosclerosis
c. Hypertension.

Gut-Pancreas Axis

The Gut-Pancreas Axis: Bidirectional Communication Network; between Intestinal Microbiota and the Pancreas, critical for regulating:

1. Glucose.
2. Lipid Metabolism.

Gut Microbiota produce:

a. Metabolites.
b. Modulate Hormones.

That affect Pancreatic Islet Function.

The Pancreas Protects the Intestinal Barrier.

1. Dysbiosis; Disrupts this Axis, Driving Diseases like:

a. Type 2 Diabetes.
b. Obesity.

Gut-Spleen Axis

The Gut-Spleen Axis: Bidirectional Communication Network; where Gut Microbiota and their metabolites influence Splenic Immune Function.

The Spleen regulates:

1. Intestinal Immunity.
2. Systemic Inflammation.

Dysbiosis (Impaired Intestinal Barrier Function) allows Bacterial Components to travel to the Spleen, triggering:

1. Inflammation.
2. Spleen Enlargement (splenomegaly).
3. Related Liver Pathology.

Gut-Thyroid Axis

The Gut-Thyroid Axis: Bidirectional relationship where Gut Health (specifically the Microbiota and Intestinal Barrier Integrity):

1. Influences Thyroid Function.

Thyroid Hormones (TH) regulate:

1. Gastrointestinal Motility.
2. Gastrointestinal Structure.

Key Functions include:

a. Nutrient Absorption.
b. Immune Regulation via Microbiota.
c. Metabolism of Thyroid Hormones by Gut Bacteria.

The body converts Thyroxine (T4) into the active hormone Triiodothyronine (T3); primarily in the Liver, Kidneys, and Peripheral Tissues (any tissue or organ located outside the central nervous system (the brain and spinal cord); in metabolic and immunological contexts, it primarily encompasses tissues such as skeletal muscle, liver, and adipose (fat) tissue) using enzymes called deiodinases.

The Thyroid produces ~90% Thyroxine (T4), and only ~10% Triiodothyronine (T3), this peripheral conversion accounts for about 80% of the active Triiodothyronine (T3) circulating in the bloodstream

Fundamental To:
Have A Healthy Gut Microbiota

Maintaining a Healthy Gut Microbiota is Fundamental for:

1. Digesting Food.
2. Absorbing Nutrients.
3. Supporting overall; Immune and Mental Health.

A thriving, diverse microbial ecosystem helps protect against disease; and keeps the digestive system balanced.

"A Healthy Gut Microbiota; not only has beneficial effects on the activity of the:

1. Immune System; but also on
2. Thyroid Function.

Thyroid and Intestinal Diseases Prevalently Co-Exist:

1. Hashimoto's Thyroiditis.
2. Graves Disease.

Are the most common Autoimmune Thyroid Diseases, and often co-occur with:

a. Celiac Disease.
b. Non-Celiac Wheat Sensitivity.

This Can be Explained by:

The Damaged Intestinal Barrier; and the Following Increase of Intestinal Permeability (Leaky Gut), allowing Antigens (any substance foreign or potentially harmful to the immune system) to Pass more easily and activate the immune system or cross-react with extra-intestinal tissues, respectively.

Dysbiosis has not only been found in:

1. Autoimmune Thyroid Diseases.
2. Thyroid Carcinoma.

In Which Increased Number of Carcinogenic and Inflammatory Bacterial Strains Were Observed.

The Composition of the Gut Microbiota has an Influence on the Availability of Essential Micronutrients for the Thyroid Gland:

1. Iodine.
2. Iron.
3. Copper.

Are Crucial for Thyroid Hormone Synthesis.

Selenium & Zinc

4. Selenium.
5. Zinc.

Are needed for converting Thyroxine (T4) to Triiodothyronine (T3), and Vitamin D assists in regulating the immune response. Iodine, iron, copper, selenium, and zinc are essential trace minerals and elements that work interdependently to support metabolism, thyroid function, and overall immune health.

These Micronutrients are often Found to be Deficient in Autoimmune Thyroid Diseases, resulting in:

a. Malfunctioning of the thyroid.

Bariatric Surgery

Bariatric Surgery (“Weight Loss” Medical Trade Surgery; for Severe Obesity such as; “Sleeve gastrectomy” and “Gastric Bypass”; that reduces Stomach size or modifies the Intestines, to restrict food intake and calorie absorption).

Can Lead to Inadequate Absorption of these Nutrients; and further implicates changes in:

I. Thyroid Stimulating Hormone.
II. Triiodothyronine (T3) Levels.

Bariatric Surgery can lead to complications such as:

1. Nutrient Deficiencies: Because food absorption is altered, patients often develop low levels of iron, vitamin B12, calcium, and vitamin D, which can lead to conditions like anemia or osteoporosis.
2. Dumping Syndrome: Rapid gastric emptying that causes: nausea, diarrhea, sweating, and dizziness after eating high-sugar or high-fat foods.

3. Weight Regain and Regret: Continue with a Bad Diet (unhealthy food choices); and Lack Exercise; lead to muscle loss (sarcopenia), and weight regain.
4. Gastroesophageal Reflux Disease: Particularly common in sleeve gastrectomy procedures.
5. Fistulas, Bleeding and Leaks: Fistulas, Bleeding and Leaks occur in 5% of patients after Medical Trade Bariatric Surgery (Sleeve Gastrectomy or Gastric Bypass); Are Serious Complications and cause Sepsis; where an abnormal connection forms between the stomach and adjacent organs or structures, often caused by staple line interruptions.
6. Thrombosis: Risk of deep vein thrombosis and pulmonary embolism.
7. Infections: Infections around the incision sites or internal areas.

The Importance of Thyroid Health

Supplementation of Probiotics; has beneficial effects on Thyroid Hormones, and Thyroid Function in general.

Intestinal Bacteria Play a Role in:

1. Vitamin Synthesis (Vitamin K, Folic Acid, Vitamin B2, B3, B5, B6, B7, and B12).
2. Digestion of Dietary Fibers.
3. Regulation of the Immune Response.
4. Mental Disorders.

In regard to Nutrition, the composition of the Microbiota can be positively influenced by Dietary Fibers, and other probiotic factors.

Intestinal Influences on the Thyroid

The Gut Microbiota largely regulates the Homeostasis; as well as the development of immune cells. It modulates both the innate and the adaptive immune system, even outside the gut, and is fundamental in the development of Gut-Associated Lymphatic Tissue, where more than 70% of the entire immune system is situated. Gut-Associated Lymphatic Tissue plays an important role in the development of tolerance to self-antigens by controlling its Toll-Like Receptors in the intestinal mucosa.

Microbiota influence the uptake of Minerals relevant to the Thyroid; including:

1. **Iodine.**
2. **Selenium.**
3. **Zinc.**
4. **Iron.**

All of them play a role in supporting thyroid function.

Iodine Is Essential for the synthesis of Thyroid Hormones, and an average adult body contains around 15 to 20 mg of Iodine, mainly located in the thyroid gland. Iodine is absorbed in the stomach, duodenum, and jejunum.

Uptake is accomplished by the sodium/iodide symporter, which is not only expressed in thyroid cells, but also in extrathyroidal tissues including: salivary gland, breast tissue, and in the stomach.

The Amount of Iodine in Soil Determines the Iodine Content of Food.

Seafood, and Seaweed (from saltwater), are a rich Iodine Source.

Iodine Deficiency

Iodine Deficiency can lead to: Goiter; probably Thyroid Nodules, and even Thyroid Cancer.

On the other hand, papillary Thyroid Cancer seems to be more common in areas with high iodine intake, suggesting complex relations between iodine levels and adverse outcomes.

Iodine; at least when applicated during medical procedures in high doses; on the opposite, has been proven to influence the Gut Microbiota.

Administering Iodine containing contrast agents can have noxious effects on the microbiota by binding to the amino acids tyrosine and histidine on the bacterial membrane, as well as by oxidation of cytoplasmic and membrane components.

Excess intake of Iodine triggers the “Wolff-Chaikoff Effect”, a transient reduction of thyroid hormone synthesis for around 24 hours after ingestion of a high iodine load.

High Iodine intake additionally can either induce hypothyroidism.

Iron is essential for efficient iodine utilization and thyroid hormone synthesis.

Iron deficiency is a common finding in hypothyroidism and is diagnosed in up to 60% of these patients. Deficiencies of Iron, and Iodine often coexist.

Zinc is an essential micronutrient for thyroid function and Homeostasis and is required for enzyme 1,5′-deoidinase, which catalyzes the conversion of Thyroxine (T4) to Triiodothyronine (T3) and reduces metabolic rate.

Selenium is an essential trace mineral, involved in the immune system and in several thyroid functions.

The Steroid Hormone Vitamin D, is pivotal for Calcium and Phosphate Homeostasis; is either:

1. **Ingested as Vitamin D2 (from the Diet); or**
2. **Synthesized as Vitamin D3 (from the Skin).**

There is accumulating data that a strong Thyroid–Gut Axis exists.

It appears to display a not well known but important correlation regarding; The Effect of the Gut Bacteria on:

1. Immune System.
2. Thyroid Function.

There is higher prevalence of the Coexistence of Thyroid and Gut Related Diseases; just as Hashimoto's Thyroiditis / Graves Disease.

Dysbiosis is a common finding in Thyroid Disorders.

On the one hand, it alters the immune response; by promoting inflammation and reducing immune tolerance, damaging the intestinal membrane and causing an increase in intestinal permeability; which leads not only to a high exposure of antigens, but also local inflammation.

On the other hand, it can directly impact thyroid hormone levels through its own deiodinase activity and the inhibition of Hypothalamus-Pituitary-Thyroid.

Gut Microbiota also influences the absorption of minerals that are important to the Thyroid; including: Iodine, Selenium, Zinc and Iron.

All of them are essential for thyroid function." - in "Thyroid-Gut-Axis: How Does the Microbiota Influence Thyroid Function?", Nutrients, 12 June 2020.

Gut-Circulatory Axis

The Gut-Circulatory Axis: Bidirectional Communication Network where Gut Microbiota and their metabolites enter the bloodstream, affecting systemic inflammation, cardiovascular health, and organ function. Key mediators include metabolic byproducts, and toxins; that travel through the blood to impact heart health, atherosclerosis, and immune responses.

Gut-Ovary Axis

The Gut-Ovary Axis: Bidirectional Communication Network; where Gut Microbiota affects Ovarian Function through immune regulation, metabolism, and endocrine signals; and reproductive function. Gut Dysbiosis can trigger chronic inflammation and metabolic disturbances (such as Polycystic ovary syndrome, endometriosis, and fertility issues) by increasing intestinal permeability and allowing bacterial toxins (Lipopolysaccharide) to enter circulation.

Gut Dysbiosis can trigger:

1. Chronic inflammation.
2. Insulin resistance.
3. Elevated androgen production, damaging ovarian function.

Gut-Testis Axis

The Gut-Testis Axis: Bidirectional Communication Network where the Gut Microbiota influences:

1. Testicular Health.
2. Spermatogenesis.
3. Testosterone production.

While Reproductive Hormones feedback to shape the Microbiome.

Dysbiosis (microbial imbalance) causes:

1. Inflammation.
2. Intestinal Impermeability “Leaky Gut”.

Allowing Bacterial Toxins to impair sperm quality.

Gut-Vasomotor Axis

The Gut-Vasomotor Axis; is an essential component of the Gut-Brain-Microbiota Axis, representing the Bidirectional Communication System that regulates blood flow (vasomotor activity) to the gastrointestinal tract, and its resulting impact on systemic health. It involves the coordination between the Enteric Nervous System, the Autonomic Nervous System, and microbial metabolites, particularly under conditions of stress or disease.

Gut-Central Nervous System Axis

The Gut-Central Nervous System Axis: Bidirectional Communication Network; linking the Enteric Nervous System (The Second Brain in the Gut) with the Brain; integrating Gut, Immune, and Endocrine Functions.

It facilitates constant crosstalk via the:

1. Vagus Nerve.
2. Neurotransmitters (e.g., Serotonin, Dopamine).
3. Microbial Metabolites.

Influencing:

a. Mood.
b. Cognition.
c. Gastrointestinal Health.

Gut-Adipocyte Axis

The Gut-Adipocyte Axis: Bidirectional Communication Network; where the Gut Microbiota and Gastrointestinal Tract; interact with Adipose Tissue (fat) to regulate:

1. Metabolism.
2. Inflammation.
3. Energy Balance.

Dysbiosis (Imbalance) in Gut Bacteria disrupts this Axis; contributing to:

1. Obesity.
2. Insulin resistance.
3. Inflammation.

Often involving the translocation of Harmful microbial metabolites, such as Lipopolysaccharide, which are toxic compounds produced primarily by Gram-negative bacteria in the gut microbiome; while harmless inside the intestine, they can trigger systemic inflammation and severe organ damage if they enter the bloodstream; in a compromised gut barrier.

Bone-Organ Axes

Bone-Organ Axes: Bidirectional Communication Networks; between Bone and other Organs; establishing Bone as an Endocrine Organ that maintains Systemic Homeostasis. The Bidirectional Crosstalk between Bone and other Organs; primarily occurs through the secretion of:

I. Osteokines.
II. Hormones.
III. Metabolites.
IV. Vesicles.

Bone interacts with organs like:

1. Brain.
2. Muscle.
3. Gut.

To Regulate:
a. Energy Metabolism.
b. Cognition.
c. Structural Integrity.

Bone-Brain Axis

The Bone-Brain Axis: Bidirectional Communication Network; linking the central nervous system and the skeleton. It redefines bones from mere structural support into active endocrine organs that influence mood, cognition, and metabolism, while the brain regulates skeletal remodeling. The Bone-Brain Axis is a Neuroendocrine Network; where the Hypothalamus and Sympathetic Nervous System regulate bone remodeling.

Bone to Brain

Bone-derived signals influencing neural function; A substantial body of experimental and clinical evidence demonstrates a reciprocal relationship between Bone and the Brain. The Bone exerts its influence on the Brain through various mediators derived from Bone.

The Brain plays a dominant role in regulating:

1. Bone Metabolism.
2. Maintaining Homeostasis.
3. Influencing disease progression.

The Bone Communicates with the Brain to Facilitate:

1. Brain Development.
2. Promote Bone Growth.

Bone-derived factors like Osteocalcin cross the blood-brain barrier to modulate:

a. Cognition.
b. Behaviour.
c. Neurotransmitter Homeostasis.

Bone-Muscle Axis

The Bone-Muscle Axis is the Functional, Mechanical, and Biochemical Crosstalk between Skeletal Muscle and Bone; is a critical interface for the interplay of various signaling molecules, growth factors, and Extracellular vesicles; orchestrating a regulatory network that profoundly impacts musculoskeletal health and disease.

Essential for:

1. Movement.
2. Homeostasis.

Muscle Contraction releases:

a. Myokines (Irisin), Hormone-like peptides produced, expressed, and released by skeletal muscle fibers in response to muscular contraction that promote Bone Density.

Bone-Derived Signals modulate:

a. Muscle Mass.
b. Function.

Bone-Gut Axis

Integrates gastrointestinal signals; including gut microbiota, metabolites, and immune cells; to influence bone turnover and density, often acting as a therapeutic target for metabolic diseases.

Bone-Kidney Axis

Bone-Kidney Axis: A regulatory loop, handling; systemic mineral balance:

1. Calcium Levels.
2. Phosphate Levels.

Renal Effects on the Bone; are generally focused on: Mineral and Bone Disease resulting from Chronic Kidney Disease.

Bone-Lung Axis

The Bone-Lung Axis (often expanded to Gut-Bone-Lung Axis): Bidirectional Communication System; between the Respiratory and Skeletal Systems.

The Bone-Lung Axis entails an intricate interplay of cellular and molecular mechanisms; involving immune signaling, stem cell trafficking, and microbial metabolites; that link pulmonary diseases (Chronic Obstructive Pulmonary Disease or Asthma), with Bone health (Osteoporosis); or Lung Cancer to Bone Metastasis.

Bone-Liver Axis

The Bone-Liver Axis: Bidirectional Communication System; where Liver health significantly Influences Bone metabolism, and vice-versa, largely mediated by:

1. Hepatokines.
2. Cytokines.
3. Metabolic Signaling.

Chronic Liver Diseases:

a. Fatty Liver Disease.
b. Cirrhosis.
c. Hepatitis.

Often Lead to Secondary Bone Loss (Hepatic Osteodystrophy), due to Metabolic Imbalances, and Inflammatory Cytokines; increasing risks of Osteoporosis.

Bone-Heart Axis

The Bone-Heart Axis: Bidirectional Regulatory Network; where Bone acts as an Endocrine Organ, communicating with the Cardiovascular System to regulate:

1. Mineral Metabolism.
2. Vascular Calcification.
3. Myocardial Energy Homeostasis.

Dysregulation of this Crosstalk; accelerates the progression of Atherosclerosis, Heart Failure, and contributes to other Cardiovascular Diseases.

Bone-Adipocyte Axis

The Bone-Adipocyte Axis: Bidirectional Homeostatic Feedback System; between Adipose Tissue and the Skeleton. Adipocytes (both marrow and peripheral) release adipokines, and fatty acids that regulate bone remodeling, while bone-derived factors like osteocalcin influence fat metabolism, connecting energy Homeostasis with skeletal integrity.

Bone-Ovary Axis

The Bone-Ovary Axis: Bidirectional Endocrine-based Communication; between the skeletal system and the ovaries, where ovarian function directly regulates Bone metabolism, and conversely, bone-derived factors can influence Ovarian activity; which is critical for maintaining both reproductive function and bone mineral density. The primary mechanism of this Axis is mediated by estrogen, which is crucial for maintaining Bone density. The primary role of the Ovaries in Bone metabolism is to secrete estrogen, which directly impacts osteoblasts, osteoclasts, and osteocytes. This disrupts the equilibrium of Bone remodeling by promoting Bone formation, and reducing Bone resorption.

This Axis operates through the Hypothalamic-Pituitary-Gonadal Pathway; where sex steroids from the ovaries influence bone turnover; and mechanisms involving “osteokines” (bone-derived cytokines) that directly influence ovarian function.

Bone-Testis Axis

The Bone-Testis Axis: Bidirectional Endocrine Pathway; where the skeleton regulates male fertility, and testes regulate bone remodeling. Bone-derived osteocalcin stimulates Leydig Cells to produce testosterone, facilitating spermatogenesis. Testosterone, secreted by the testes, is the primary hormone in males and plays a crucial role in bone metabolism.

Androgens bind to androgen receptors on osteoblasts, osteoclasts, osteocytes, and growth plate chondrocytes, to inhibit trabecular bone resorption and maintain bone Homeostasis.

Bone-Intestine Axis

The Bone-Intestine Axis: Bidirectional Communication System; where the Gut Microbiome regulates:

1. Bone Remodelling.
2. Bone Density.

Regulates Health through:

1. Immune.
2. Endocrine.
3. Nutrient-Absorbing Mechanisms.

Beneficial Gut Bacteria produce Short-Chain Fatty Acids; that:

1. Increase Calcium Absorption.
2. Reduce Inflammation.
3. Promote Bone Formation.

Gut Dysbiosis leads to:

1. Bone Loss.

The Gut Microbiota, consisting of Trillions of Microorganisms residing in the Intestine and establishing mutually beneficial relationships with the host; primarily influences bone through the Intestinal Tract.

The Gut Microbiota exerts its impact on various physiological processes of the host, including:

1. Growth.
2. Energy Metabolism.
3. Immune Function.
4. Inflammatory Processes.

Through; Nutrient Production and Absorption; immune regulation, metabolite release, systemic inflammation modulation as well as metabolite generation; the Gut Microbiota significantly contributes to the Regulation of Bone Remodeling.

Probiotics are Living Microorganisms; that exert positive effects on the host's health; when consumed in specific quantities; they are anticipated to be Utilised For The Modification of Bone Disease.

Pancreas-Bone Axis

The Pancreas-Bone Axis: Bidirectional Endocrine Feedback Loop; regulating energy metabolism, where Osteocalcin produced by Bone stimulates Pancreatic Insulin secretion and sensitivity.

Insulin regulates Bone Remodelling, acting as a crucial mediator in:

1. Glucose Metabolism.
2. Bone Mass.
3. Mineral Density.

Often involving Vitamin D.

Thyroid-Bone Axis

The Thyroid-Bone Axis comprises the regulatory relationship where thyroid hormones (T3/T4) and Thyroid-Stimulating Hormone directly modulate bone remodeling, development, and mineralization.

Proper Hypothalamic-Pituitary-Thyroid function is vital for Skeletal Integrity.

Hyperthyroidism and Hypothyroidism; both increase bone turnover, decrease mineralization, and heighten fracture risk.

Hypothyroidism leads to decreased bone turnover, and impaired osteoclast-mediated bone resorption as well as osteoblast-driven bone formation.

The Hypothalamic-Pituitary-Thyroid Axis plays a key role in skeletal development, acquisition of peak bone mass, and regulation of adult bone turnover.

It Is Crucial To Consider The Multifactorial Nature of Bone Metabolism

“The interplay between various organ systems, and bone metabolism is highlighted by the axes of intestine-bone, pancreas-bone, and thyroid-bone.

For example: The Gut Microbiota not only influences nutrient absorption; but also modulates immune responses that can either promote or inhibit bone resorption. Similarly, insulin from the pancreas and Thyroid Hormone, directly and indirectly, impacts bone Homeostasis by affecting both osteoblast and osteoclast activity. The potential of Intestine-Bone Axis in modulating bone health through Dietary Interventions, or Probiotic Supplementation is particularly intriguing, targeting specific microbiota such as Clostridium or Bacteroides that promote T Tegulatory (Treg) cell development.

The Pancreas-Bone Axis offers a compelling avenue for understanding the metabolic underpinnings of Bone Health, especially in relation to: Diabetes and Pancreatic Cancer.

With its well-defined hormonal pathways, the Thyroid-Bone Axis provides a robust framework for therapeutic interventions, particularly for conditions like hyperthyroidism that lead to bone loss.

It Is Crucial To Consider The Multifactorial Nature of Bone Metabolism; as single-axis interventions may not yield the desired outcomes due to compensatory mechanisms in other axes.

Therefore; Adopting a Holistic Multi-Targeted Approach May Prove More Effective.” - in “Bone-Organ Axes: Bidirectional crosstalk”, Military Medical Research, 12 June 2024.

The Emunctories; And Their Axis Effects Upon All Organs

The individual, should be mindful that; if the Emunctories (Eliminating Centers) are not Stimulated in the sense of using stimuli of any nature for the reaction of same, but rather that the assimilations of the system are such that the eliminations are Kept normal.

These, are best accomplished through the activities of the Mental Body, aided by applications physically that Will bring the Coordination of:

1. Respiratory System.
2. Alimentary Canal.
3. Perspiration Glands.
4. Deeper Breathing.

All have their part.

Chapter 36

Colon Hydropathy In the Treatment of Mental Disease

"It happens for instance, that in this or that part of the Thick Viscera "Intestinum Crassun", through whatever cause, there is formed a contraction, or stricture, through which the substances to be ejected, when they remain for a long time, become dry and indurated, and are therefore not able to pass through so as to be ejected. And, is it not well known, that a Great Number of Diseases Belonging to the Psyche, Have Their Principal and Original Cause; and Seat in Obstructions of the Thick Viscera?
Have not the celebrated Esquirol, Pinel and many other, observed and shown by facts in Mental Sufferers, the Viscera, particularly the Colon, Obstructed, etc." *- Dr J. Edward Feldmann, MD in "Theory and Practice of Hydropathy", 1843.*

Copro-Psychiatria

"We have now to speak of the abnormal length and arrangement of the colon, an anomaly the lowest degree of which so often presents itself as the M-shaped depression of the transverse colon into the hypogastrium, while its higher grades are associated with the formation of many abnormal flexures and S-shaped curves. **This abnormal arrangement of the colon was often mentioned by the older writers (Ruysch, DeHaen, and others) as something important, described with great detail, and not unfrequently illustrated by many sketches.** In Esquirol's time **far too much weight in the Etiology of Mental Diseases was attributed to this, and to the Coprostasis which was believed to be its necessary consequence, going so far as to establish the so-called copro-psychiatria,** (Griesinger, Path. u. Therap. d. psych. Krankh. S. 201, et seq. 1845). **The records contain numerous examples in which habitual accumulation of faeces in the rectum and sigmoid flexure (especially in old people), has led to permanent arrest of the peristaltic action of the colon, to paralysis with hyperextension, and thus to ileus, which either ended fatally or yielded to proper treatment, with evacuation of enormous masses of faeces. Habitual Coprostasis, due to enfeebled peristaltic action of the colon, is very common in advanced life, in those of sedentary habits, in atrophy of the intestine occurring in the course of chronic cachexias, and especially, too, in Lunatics.** Under all these circumstances, we not unfrequently find, as a result of habitual arrest of the faeces, that the course of the colon is abnormally sinuous. **The frequency with which these anomalies are found in the bodies of Lunatics; led physicians to attribute too much importance to them in the Etiology of Mental Diseases."** - Professor Dr H. von Ziemssen, MD, in "Cyclopaedia of the Practice of Medicine", 1876.

The Role of Auto-Toxis in the Production of Insanity

Report on Nervous and Mental Disease
Cerebro-Mental Disease from the Etiological and Clinical Standpoints

"At a general meeting of the Medical Society of London, 11 May 1897, Dr Allan McLane Hamilton, MD of New York, presented a contribution on this subject.

He had conducted clinical observations and experiments on animals to determine whether there was any specific or noso-toxicity of the urine of the insane, and if so, its nature; next to discover how important and general was the theory of **uric acid poisoning; and, again, whether mental disorders were produced and modified by an Auto-Toxaemia, whether the offending substances were the leucomains or the intrinsic products of putrescence in the intestines.** The resulting effect seemed to depend upon the increased specific gravity of the urine, and on the evidences of intestinal disorders and malnutrition. The urine of the paretic was always exceedingly toxic, which property was possessed by that of the periodic patient whose urine showed a large amount of indican, while in only one of the other cases of mania in which the specific gravity of the urine was high was any result obtained by the injection. **His cases unquestionably bore out the assumption that disturbances of the gastro-intestinal tract were attended whit bacterial necrosis, and the introduction into the general circulation of certain very virulent toxic agents, whose effects were expended mainly on the nervous system.** A sudden and rapid development of incoherence with malassimilation, highly-coloured urine, and delusions that were unsystematised, clearly suggested an inquiry into the condition of the organs of digestion, and the first step should be a complete examination of the urine and faeces. **The presence of Indican in the urine of the Insane has great significance, for in all the cases that were not simply evolutional it had been discovered in excessive quantities, in connection with the development or as a feature of an exacerbation of an existing Mental Disorder.** In Melancholia the amount of indican depended upon whether the disease was of the stuporous or agitated variety, the quantity not being nearly so great in the former.

Variations in the haemoglobin and red corpuscles were closely associated with the absorption of toxic substances, the extent of which was announced by the increase of the combined sulphates, while the physical appearances were those of malnutrition.

Undoubtedly many Puerperal Insanities, especially those of the Maniacal variety; Were Due to Faecal Accumulation.

Alcoholic insanities, as well as other forms, whether acute or chronic variations prevailed, must be studied with regard to the condition of the intestines. The management of these cases not only included the provision of an absolutely suitable diet, but the use of antiseptics and mechanical means for cleansing the alimentary tract.

It had been shown that the lower bowel was usually the seat of infection, hence the necessity of thoroughly washing out from as high a point as possible.

Salicylate of sodium bad been found the most reliable intestinal antiseptic.

In replacing the diminished haemoglobin and red corpuscles best results had been obtained from a mixture of glycerine of the red marrow of small bones with bullocks blood.

Dr Hamilton, MD arrives at the following conclusions:

1. Urines rich in indican contained very little or no preformed sulphuric acid, and were toxic.
2. When the sulphate ratio is materially changed it probably indicates auto-toxis, in connection with an increased amount of combined or ethereal sulphates.
3. Such indications were generally found with acute insanities in which rapidly developing symptoms occur.
4. Changing illusions and hallucinations, unsystematised delusions, confusion, with verbigeration in connection with insomnia, pallor, intestinal indigestion, constipation and rapid exhaustion are due to auto-toxis.
5. Paranoiac states, or those in which concepts are the features, chronic stuporous conditions and certain forms of dementia have little to do with the formation of intestinal products of putrefaction.
6. Various post-febrile, traumatic, alcoholic or drug insanities are those in which auto-toxis is most constant.
7. Variations in excretion of combined sulphates keep pace with the changes in the progress of an established insanity, epileptiform attacks being directly connected with putrefactive processes.
8. The most successful treatment consists in Lavage, Intestinal Douches, gastric and intestinal antisepsis, by means of hydrochloric acid, borax, salicylate of sodium, charcoal, guaiacol, or naphthalin in small and repeated doses, and the administration of a combination of the red marrow from the small bones, blood and glycerine." - Dr Ringrose Atkins, MD in "The Dublin Journal of Medical Science", 1897.

On the Nature of Insanity, and its Treatment by Irrigation and Prolonged Baths

"M. Brierre de Boismont recently presented to the Paris Medical Society a Report upon a Memoir by Dr M. Turck, Physician in Chief to the Vienna General Hospital, upon the Nature and Treatment of Insanity.

He comments upon some of the Theories of Insanity which have prevailed.

Broussais, as is well known, affirmed that insanity always arises from irritation of the brain (and in this statement he has met with many more supporters in this country), but M. Brierre de Boismont asks:

> *"Who has seen the irritation of these capillary vessels? What are the anatomical characters?"*

Most mad-doctors do not admit the existence of pathological lesions, or only regard them as consequences of the disease. I dissected, with M. Bricheteau, the brain of a madman, who had been the subject of intermittent mania for 12 years, and who died after an attack of acute hydrophobic delirium of 12 days duration, and we were unable to indicate any appreciable lesion.

The same thing occurred with respect to an imbecile woman who, after inhabiting my establishment for 18 years, also died after a third attack of acute delirium. It is endeavoured at all hazards to explain the disorders of the mind by anatomical considerations, even when we are quite unaware of what material change takes place in the brain and nerves for the execution of their functions.

Every day we observe the most varied and gravest morbid changes without their exciting any influence in producing a state of insanity. The greater or less afflux of blood can so little be considered as the necessary cause of insanity, that frequently apoplexy induces no change in the functions of the intellect, even at the time that effusion has occurred, or paralysis is present. In the physiological condition, the general circulation (as may that of the carotids by some local malady) may be accelerated with out the reason suffering. So far from inducing insanity, the greater afflux of blood to the brain induces sleep and somnolence.

Moreau has of late endeavoured to revive the above theory, by stating maniacal excitement to be the primary modification of the intellect, and essential condition of the manifestation of any description of insanity.

But this word excitement means an excess of organic action, and while this will induce certain forms of insanity, others are produced by quite opposite causes.

Cerebral Anaemia gives rise to insane conceptions as well as hyperamia. If febrile excitement induces cerebral disturbances, we observe such disorders only commence in many cases when the decline of the fever has plunged the patient into a state of sinking. With an excitement represented as always "identical in itself, the most varying forms of insanity have all the same point of departure. A woman sees her child perish, she becomes stupefied and falls into a kind of imbecility, and are we to refer her case to this maniacal excitement?

A man, towards the end of a chronic disease which has reduced him to the last stage of marasmus, is seized with a mild form of delirium, in which he believes he is quitting the hospital and following his occupation. Are we to refer this to the same cause? According to this theory, more or less vigorous antiphlogistic treatment should necessarily be put into force.

Now, a man is brought to you in a state of furious delirium, and you bleed him until he becomes calm, and the result will frequently be an incurable dementia.

Many monomaniacs are much injured by bleeding; and many others recover from their hallucinations by moral treatment alone; and even M. Moreau, the founder of this variety of the irritation of Broussais, states they are frequently relieved by the datura stramonium.

> *"M. Leuret has not sought the cause of the disease in cerebral changes, but states that it may exhibit itself unconnected with any physical symptom, and that it is but an error of the mind, a purely moral disease calling only for moral remedies, our object being to substitute one impression or passion for another. Attributing insanity to a disease of the mind may appear revolting to spiritualists and excite the smiles of the materialist; but we must admit that the question is not so simple as it seems. Elsewhere I have endeavoured to suggest another theory, by establishing that man's ideas spring from two sources. He lives in the midst of an atmosphere of false ideas proceeding from his senses, from education and the social condition in which he exists, and it is there we must seek for the origin of manias, monomanias, etc. In this way we can understand how certain ideas may be come diseased, without the divine breath which animates him being implicated. In this point of view, the beautiful results which have attended moral treatment are intelligible enough. We are, however, far from denying the existence of cerebral change, although this as yet has not become appreciable; but it is but a secondary fact in the doctrine of mental diseases, important though it often is in its therapeutical relations."*

M. De Boismont next refers to M. Turck's treatment mode of insanity, which, indeed, in a modified manner, and without any knowledge of M. Turck, M. Brierre de Boismont has been in the habit of employing with success for some years, and an account of which he furnished to the Academy of Medicine in 1842 and 1846.

M. Turck treatment consists in the prolonged use of tepid baths. The bath must be prolonged "during a whole or several days", and, if required, repeated during a period of several months. One girl was cured by a "single bath of 10 days duration." By such treatment M. Turck declares he has cured 80% of the cases which have come before him.

M. De Boismont attaches Much Importance to the Curative Agency of prolonged Baths and Irrigations.

His former conclusions upon the subject are here reprinted:

1. All the acute forms of insanity, and especially of mania, may be so cured in a space of time varying from 1 to 2 weeks.
2. The treatment consists in the employment of prolonged baths and irrigations.
3. The duration of the baths should be in general from 11 to 12 hours, but it may be extended to 15 or 18.
4. The irrigations of the head by a gentle stream of water should be continued during the entire continuance of the bath, unless the patient becomes composed, when they may be suspended.
5. When the patient has taken from 8 to 10 baths without marked amelioration they must be suspended, to be resumed at a future period,
6. The temperature of the baths should be from 82° to 86° F., and that of the irrigations 60° F.

7. Of all the forms of insanity, acute mania best yields to this treatment, then simple acute delirium, delirium tremens, puerperal mania, and melancholy monomania with acute symptoms; but, in several of these forms of disease, the cures are neither so rapid nor so permanent as in acute mania.

8. Chronic mania with acute symptoms, and chronic mania with agitation, may be ameliorated. - Revue Medicale, Nov. 1846." - in "The Medico-Chirurgical Review", Vol.50, 1847.

Hydrotherapy in Insanity

"I have come to have very much reliance upon Hydriatic measures properly applied in the treatment of these cases, the simpler forms can be readily applied in almost any household. One of the most effectual methods to quiet excitement, secure sleep, and promote elimination is the Wet-Sheet Pack. Were I called to a private house this morning to see a case the type of which is familiar to us, with wakefulness, agitation, psychomotor restlessness, and the train of symptoms that accompany acute maniacal excitement or agitated melancholia, I should, if it were possible, first give the patient a large simple Enema of water at 38°C.

I would then thoroly wash out his stomach with sterilized water at about 38°C., then wrap him up in a large wet sheet saturated in water at about 44°C. and then thoroly roll him up in blankets, using 2 or 3 or more if necessary.

A little experience will enable one to so envelop the patient in the wet sheet and blankets that however restless and uneasy he is, it forms one of the very best methods of restraint.

We very often find that a patient in a wet-sheet pack soon quiets down and presently drops asleep, sometimes sleeping the night in the pack. In any event he often gets from 1, 2 or 3 hours of refreshing sleep. When the pack is removed he can have an alcohol rub or a little light massage, which any intelligent person can give with a little instruction.

There are dangers of collapse, but the signals of such danger are so plain that the doctor will recognize them very readily, and his patient may be removed from the pack and such methods of stimulation resorted to as may seem to be required.

When in the pack, ice to the head and hot-water bottles to the feet are important. This Wet-Sheet Pack may be repeated when the patient again becomes restless or disturbed.

The quantity of water which he drinks while in the pack promotes elimination, and this method is altogether so much more rational and simple, than the heavy dosage by drugs, that I think it important that it should be brought to the attention of every physician who is likely to have a case of acute insanity upon his hands for 2 or 3 days or longer." - Dr. Hitchcock, MD in "Medical Age", 1903.

> *"Diet and above all antiphlogistic one (to reduce inflammation), regimen, **specially exercise of the body, warmth, loosening of the bowels, now and then an emetic; among which if they were used, warmth was likely to come first. We find these Recommendations by the Hippocraties for curing the Insane."** - Dr Smith Ely Jelliffe, MD, in "Notes on the History of Psychiatry", Alienist and Neurologist, 1917.*

Trenton Psychiatric Hospital

"The first of New Jersey's public mental hospitals, Trenton Psychiatric Hospital, began providing services on 15 May 1848. In 1907, Dr. Henry Andrews Cotton, MD became the medical director, and a new era in the treatment of mental diseases began. Among other improvements, Dr. Cotton is credited with abolishing all forms of mechanical restraints and implementing daily staff meetings to discuss patient care. Over the years, new treatments such as Hydrotherapy, Occupational Therapy." - Dr. Nila Sheth, MD, in "American Journal of Psychiatry", Dec. 1999.

"Since 1925 we have been using physiotherapy in the treatment of gastrointestinal stasis. This is successful in about 80% of cases. Colonic Irrigations to the number of 30 are given to each case on alternate days.

On alternate days diathermy and Morse Sine Wave are given to restore the muscular tone of the diseased colon. A combination of these 2 methods has produced very good results. This can be shown not only by the cessation of constipation, but by a comparison of the x-ray studies made prior to and after treatment." - Dr Henry Andrew Cotton, MD in "Annual Reports of the Officers of the New Jersey State Hospital at Trenton", 1929.

> *"A certain amount of toxicity can be coped with but a relative overflow causes the outbreaks of Insanity. In nearly every mental case that is physically ill at the time of admission to hospital. I no longer recommended colectomy, but used copious Colonic Douches instead. The results of this form of Irrigation in 600 cases had shown to been very satisfactory." - Dr Henry Andrew Cotton, MD*

Gastro-Intestinal Motor Functions in Schizophrenia

"Radiological observation of Gastrointestinal Motor functions in 51 cases of schizophrenia affords the following general conclusions:

1. Definite changes in these functions are found.
2. The changes are somewhat characteristic of the different clinical types.
3. The more acute the psychosis is, the more abnormal are the changes.
4. Gastrointestinal motor functions are normal in chronic deteriorated cases.
5. The visceral reaction to intense emotions in acute schizophrenia is analogous to that observed in lower animals when experiencing fear, rage, etc.
6. In acute schizophrenia the colon is most susceptible to sympathetic control.
7. In acute schizophrenia sympathetic control of certain functions and concomitant autonomic control of other functions contributes to disorganization of digestive processes.
8. In 70% of acute, actively hallucinating cases there is retention of barium or of food residue in the colon for a period longer than 5 days." - Dr George W Henry, MD in "American Journal Psychiatry", 1927.

The Colon in Mental Disease

Dementia Praecox

"It is certainly reasonable to expect to find in the psychotic individual the most profound and prolonged of emotional states; this being unquestionably true, and if emotions alter the functioning of the gastro-intestinal tract, then the most profound and prolonged of functional alterations should be observed in the gastro-intestinal tracts of psychotic individuals. It is the purpose of this paper to present a study of one portion of the gastro-intestinal tract, the colon, in one type of mental disease, dementia praecox.

The dominant emotional states, subjective and objective, of the patients were classified as, indifferent 35, agitated 6, and tense 7.

The emptying time of the colon was 48 hours for 14 cases, 96 hours for 14 cases, 144 hours for 9 cases, 192 hours for 3 cases, 240 hours for 3 cases, 288 hours for 3 cases, and 336 hours for 2 cases. Dementia praecox, as it is conceived today, is a mental illness characterized by supposed marked deviations from the normal in personality, which deviations are emotional, overt, and intellectual.

The changes in body chemistry or physiology found in an individual with dementia praecox are an expression of his psychosis and may not only reflect it but contribute to it. A normal individual is usually considered as an entity in existence; as an individual reacting to his internal and external environment and expressing this reaction by thought, word or action.

Upon occasion some emotional tension will bring about some physiological response which we are able to observe; such as, shaking in fear, crying in sorrow, striking in anger. These physiological responses are all the result of the emotion, certainly not the cause of it.

Such responses can also be participated in by the gastrointestinal tract, as when a reaction to an emotion occurs such as nausea and vomiting in disgust, constipation when worried, and sudden evacuation in moments of intense fear and excitement.

These reactions are all logical and have repeatedly been explained by the equation strong emotion reacts upon the autonomic nervous system which in turn elicits certain specified responses from the periphery.

Thus the response of the colon to the emotion is an expression of the psychosis and if the response assumes malignant proportions (such as retention of faeces for days until such retention may produce physical symptoms) then the physiological response may contribute to the symptomatology of the psychosis.

It is rather hard to conceive of the gastro-intestinal tract acting in a voluntary manner of it taking the initiative with no stimulus whatsoever and setting the pace whereby false observations are liable to be made. It would appear that since the chemistry and physics of the gastro-intestinal tract are controlled by the autonomic nervous system that any functioning of the tract would be in response to some stimulus which would be controlled by this system.

Since this system is not conscious, it is only reasonable to assume that it could not voluntarily be controlled; that the functions of this tract would be true reflections of stimuli whether they be emotional (conscious or unconscious), chemical or physical, overt or intellectual.

Thus, we find that:

a) Emotions do affect the gastrointestinal tract and can condition it,

b) These emotions can be conscious or unconscious,

c) They can be completely concealed by superficial or false emotions which act as a blind giving the real emotions room for free play,

d) The colon which is not subject to such concealment reflects the true emotional state of the individual,

e) In the majority of cases of dementia praecox there is some imbalance of the autonomic nervous system as expressed by studies of the colon.

There is no question but that in the study presented herein, in the colons of individuals with dementia praecox there is a definite abnormality in the emptying time and/or tonus in a large number of cases.

As is well known the normal functioning of the large bowel is dependent upon a normal balance existing between the sympathetic and parasympathetic nervous systems.

When there is some imbalance, regardless of the precipitating factor or factors, there results abnormal functioning of the colon. Since in many cases of dementia praecox there exists this abnormal functioning of the large bowel, it would appear unnecessary to ascribe it to any other mechanism than to the autonomic nervous system imbalance.

The mechanism underlying this imbalance is in most all probability the emotional, overt and intellectual imbalance which constitutes the psychosis." - Dr Purcell G. Schube, MD in "Psychiatric Clinic, Boston State Hospital", 2 July 1936.

The Following Chapter is Chapter 15 of the Book: "Colon Hydropathy The Clinical Evidence and The Health Conditions That Helps To Resolve", 2021.

Chapter 37

The Relation of Intestinal Autointoxication to Mental Diseases

"At one time or another, by someone, the gastrointestinal tract has been blamed for nearly every disease and symptom from which mankind suffers. It was only natural, then, that when the awakening came about mental diseases that this channel should be credited with being the cause of a large amount of the trouble. Especially was this plausible when the most cursory examination showed that a disturbed intestinal tract and a disturbed brain were nearly always associated.

Closer observation soon showed, however, that, while these 2 systems were conjointly disturbed, they did not always bear the same relation to one another. It was soon noticed that they varied in their precedence and that the autointoxication caused numerous and diverse symptoms both in the brain and other parts of the nervous system. Clinical experience indicates some very marked and dependable conclusions.

Mental Derangement and Constipation

No one, for instance, will deny the fact that all persons mentally deranged show aggravated symptoms when their bowels become constipated. If they are depressed, the gloom will become greater; if they are maniacal, the excitement will invariably increase. A few days ago there was brought to us a young man suffering from a marked hebephrenic type of dementia praecox.

Even a muffled room could not exclude his screaming and talking. Just 20 minutes after the voidance of a copious high enema he was quiet and asleep. And he has remained comparatively quiet ever since, excepting when his bowels have become constipated, at which times he has been very noisy. A jeweler suffering from a so-called incurable senile dementia became so melancholy that he threatened his own life.

A vigorous course of enemas along with mas sage and regular living, and he was healthier and more robust than for years. And so on, the cases could continue endlessly, showing that mental disorders are aggravated by intestinal autointoxication.

Symptoms Indicating Autointoxication

Another set of facts proving the same statement is the condition of the majority of the mental cases coming under treatment. Practically all of them present several of the following symptoms:

1. Muddy skin; sometimes making them look as yellow or dark.

2. Sickening sweet breath; so offensive that a whiff of it will nauseate the examiner. This breath should not be confused with the bromide breath, it is sweeter and more nauseating than that; nor with the tonsil and foul-mouth breath, it does not resemble decaying material as that one does. It is more like the acetone breath, only sweeter.

3. Indicanuria. We have been surprised, time after time, at the tremendous amounts of indican our mental patients pour out in their urine. And we have also learned that many clearing spells can be prognosticated long in advance of the clearance by observing the density of this reaction.

4. Impacted Colon. Every mental patient should undergo a thorough abdominal examination. I have been able to demonstrate, many times, to my assistants the exact course of the colon by palpating this hard, sausage-shaped mass in the relaxed abdomen. (And, by the way, a relaxed abdominal wall is a serious handicap to improvement in a mental case.) In many instances this mass is so perfect that almost the entire course of the organ from the ileocecal opening to the anus can be made out.

5. Packed Rectum. It is truly wonderful the condition the rectal contents may attain. In most cases, especially where they have been kept under opiates, the examining finger feels much as though it had been thrust into a gravel bank.

Scybala so hard that they ring like stones when they strike on a solid object, so dense that they can only be crushed with a hammer, and so offensive that they can scarcely be worked with are found in large numbers.

Of course all the patients do not have all of these symptoms of intestinal incompetency, but in every instance where several of these are found their subsidence marks the subsidence of many of the general and mental symptoms.

Constipation

One of the common sources of error in treating patients of this kind is to ask them or their attendants whether their bowels are moving daily, and then to be satisfied when they answer in the affirmative. The normal stool varies from 60 to 250 Grams in weight, and from 1 to 4 evacuations daily to 4 to 7 in a week. This amount can be varied readily and in no sense of the word can it be used to base serious conclusions upon. Consequently, the mere fact that the bowels have moved ought not to be sufficient evidence that autointoxication does not exist. Some time ago we investigated carefully the subject of the amount of the stool in mental cases and found that, although a patient under observation was having a daily evacuation, he still had a very marked impaction of the colon.

Anatomically, the colon is built like a series of balloons opening into one another. It is not a straight tube with straight sides. There are numerous pockets all along it in which fecal material may collect. The hepatic, splenic and sigmoid flexures may likewise expand so as to hold excessive quantities of old excrement. Besides, in many mental cases with relaxed abdominal walls the transverse colon has made a deep loop which is filled with hard fecal material.

Bit by bit all these cavities are filled until the patient is holding a large quantity of fecal material from which he is absorbing deleterious substances into his body, yet at the same time is having an evacuation from the bowels every day.

The main hall is open but the adjoining rooms are polluted.

A teaspoonful of material retained daily will soon fill all the colonic cavities, and the shrewdest observer of the excreted stool will not be able to detect the loss of a teaspoonful from the usual amount.

Again, the fecal material may collect along the sides of the colon much as lime scale collects on a water-pipe, leaving an open but ever-decreasing channel in the middle. After days of active purgation I have washed away from demented patients material curved in shape, hard and covered with blood, pus and mucus on the convex side, everything showing that the material had not only collected on the colon-wall but that it had eroded and ulcerated the mucous membrane as well. In other cases the rectum itself may be the offending member.

Just above the lower sphincter is a space which normally feels very small, a little larger than the index finger. In many cases of impaction this enlarges to the size of a fist or more, and a large mass of hard fecal material will collect in such a fashion as to act as a ball in a ball-and-socket valve.

Each day the ball will rise slightly, allowing a small amount of material to come through but not permitting the rectum or sigmoid or colon to clear itself.

I had suspected this condition for some time, but only recently was able to demonstrate it beyond a doubt.

A maniacal woman seized a large diamond ring from her sister-in-law and before she could be stopped swallowed it.

It being inadvisable to give the patient an emetic, the stools were ordered watched and the patient allowed to go on as before. A few days after the occurrence she returned to her home for a visit, joined in the Christmas festivities and returned to the sanatorium for treatment. During her absence she had had a stool every day and seemed to be in as good condition as usual. Eight days after the ring was swallowed a radiogram of the abdomen was taken soon after noon.

The negative showed a doubtful shadow low down in the pelvis.

The two following mornings the patient had evacuations as usual, 36 hours after the first negative was taken a second one was made.

This also showed a shadow low down in the pelvis. I then inserted my finger into the patient's rectum and found it greatly dilated and occupied by a round solid mass nearly as large as a base ball.

This I crushed with some difficulty and found the ring in its center.

Now, this patient had traveled nearly 600 miles by train, had had a bowel movement every day, and for two days that we know of positively this ring lay within two inches of the rectal outlet and did not pass out in two fairly good-sized movements which the patient had bad.

This hard faecal ball, forming a perfect valve, only lets a small portion of the faecal material pass out.

Other Treatments May Be Needed

These patients were Cured by cleaning out the bowel alone (all needed other treatment, massage, baths, and the like), none were ever cured unless this was done, and several relapsed because they failed to follow instructions regarding these matters after they left the institution.

It would take too long to detail all the facts that experience has taught in regard to colonic constipation.

Suffice it to say that the doctor who attempts to treat the mentally diseased, without arranging thoroughly and continuously to evacuate the bowel, will not succeed. This brings us to the best method of accomplishing the result desired. Since, as we have said, the colon is mostly at fault in these cases, our measures must be directed to that organ.

Many persons have fallen into the habit of self-medication. They know nothing about drugs but consider them all alike and take anything which their druggist offers them. Then, too, a number of doctors pass out to their patients anything in the way of a laxative that is handy, never stopping to consider whether it is indicated or not.

With us, the best results are obtained by a mixture of 4 forces:

1) Enemas
2) Abdominal massage
3) Physical culture exercises
4) Electricity

(Note on Diet: obviously a wholesome healthy diet is the ideal diet)

Diet cannot be depended upon, because most of the mentally deranged will not eat regularly, masticate properly or partake of any definite set of dishes.

Value of Enema

In all our cases enemas take the first place. More than once we have turned a maniac into a quiet subject by merely emptying the lower bowel with water. Although myself and my assistants have given several thousand of these treatments, we have never had any bad results nor has a single patient, no matter how violent, been injured.

Nearly always two quarts of water are used at one sitting. If the faecal material is badly collected, the attendant introduces two fingers into the rectum and while the water is running gently crushes the harder and larger particles and washes them out. Another attendant then kneads the abdomen and gradually works the colon empty. This is repeated daily until the movements are coming away soft and of good colour and odour. If the material that comes away is very bloody, olive oil impregnated with aqueous calendula is allowed to remain in the colon after it has been flushed out.

Massage

The abdominal massage is carried on by a skilled operator and is given so as to empty the colon and strengthen the abdominal muscles. The chief aim of the physical culture is to strengthen the abdominal muscles.

It usually cannot be employed until late, as the majority of mental patients will not go through the movements properly while disturbed.

We use a set of 15 exercises: 5 lying down, 5 sitting up, and 5 standing. They are all given in the presence of the instructor and are added to as she deems best.

Electricity

Both sinusoidal and faradic electricity are used over the abdomen at regular intervals. Most of the patients object at first, but if made to undergo it a few times, they usually acquiesce and take treatment quietly. Other measures are used to treat the case generally. The ones here outlined are for the intestinal difficulty solely.

Conclusion

After the patients have regained their normal mental balance and have returned to their homes, and they are cautioned about not permitting themselves to become constipated again, for we believe that:

1. All persons who are mentally de ranged are aggravated by intestinal auto intoxication.

2. Sooner or later nearly all mentally de ranged patients show a set of symptoms which speak for autointoxication.

3. One must not believe that because the patient is having a daily stool he is not suffering from intestinal autointoxication.

4. The best method for overcoming the autointoxication is to unpack the rectum and colon by repeated copious enemas followed by abdominal massage, physical culture movements, and electricity.

5. Lastly, that mental diseases could, to a large extent, be averted by carefully keeping the bowels open at all times so as to stop intestinal autointoxication." - Dr Carl W. Sawyer, BS, MD, Marion, Ohio, Neurologist of the C. E. Sawyer Sanitarium, in The American Journal of Clinical Medicine, Vol.18, 1911.

"In all cases of mind disease, we should look well to intestinal autointoxication. I see from Dr. Carl W. Sawyer, of Marion, Ohio, some excellent ideas I have seen tried with excellent results. He speaks particularly of impacted colon.

Every mental patient should undergo a thorough abdominal examination.

A sickening sweet breath, more offensive than the bromide breath, nor with the tonsil and foul mouth breath; it is more like the acetone breath, only sweeter. He says again, we have been surprised at the tremendous amount of indican our mental patients pour out in their urine.

The doctor's experience in other conditions are like my own in these respects. This colonic constipation must be relieved. High enemas is the only way to success in these cases. As the colon is mostly at fault our measures must be directed to that organ, as the maniac can be made to become quiet by emptying the lower bowel with water.

Retain the injections for quite a while, at the same time massage the bowels thoroughly along the colon. Use this daily until the bowels are thoroughly cleaned out." - Dr R.R. Hopkins, MD in "The Medical Summary" Vol. 34, 1913.

The Following Chapter is Chapter 16 of the Book: "Colon Hydropathy The Clinical Evidence and The Health Conditions That Helps To Resolve", 2021.

Chapter 38

Colon Irrigation in the Treatment of Mental Disease

"The purpose of this article is to present a report of the result of the treatment of mental disease by the use of Colon Irrigation at the Gardner State Colony. The evacuation time of the colon in 3 groups of mental cases lie reports his results as follows:

1. Dementia praecox 113 hours;
2. Manic depressive psychosis 154 hours;
3. Psychoneurosis 80 hours.

After treating patients in each of these groups by Colon Irrigation:

Dementia Praecox Cases 17% Recovered;
Depressive Psychosis Cases 70% Recovered;
Psychoneurosis Cases 80% Recovered.

Of the total cases, all groups, 40% Recovered, 33% Improved, and 57% were Released on Visit.

Approximately 200 Colon Irrigations are being administered monthly at the Gardner State Colony. No untoward results have been noted in any case. It is unnecessary to employ elaborate apparatus or elaborate solutions.

Good results can be obtained with weak solutions of sodium bicarbonate, one-half normal saline solution and weak solutions of tincture of green soap. The quantity of fluid used during an irrigation will vary from 38 Litres to 76 Litres warmed to a temperature not to exceed 43C.

Summary

Colon Irrigation aids in combating a number of abnormal conditions.

By cleaning out the colon the system is afforded relief from toxic products and an unnecessary burden is removed from metabolic processes; by its mechanical cleansing action cleanliness in habits is promoted; by the absorption of fluid from the colon, which takes place during treatments, dehydration is relieved.

From our experience this treatment produces a quicker return to mental stability in our opinion in favourable eases.

In active cases sedation is unquestionably obtained, strikingly shown by a reduction in the number of wet sheet envelopments required, which prior to this form of treatment numbered from anywhere up to nearly 500 monthly. Since the use of colon irrigation, wet sheet envelopments have fallen to less than 60 monthly and sometimes none at all. From the standpoint of the hospital, it is interesting to note that the destruction of mattresses, sheets and clothing has fallen off approximately 50%. Our results may be given as follows:

From June 1930 to 1 May 1932 we have given 5,468 colon irrigations averaging 44 minutes each to 191 different patients. This represents between ¼ and 1/5 of our population which in round numbers is 1350.

Results

Home	23.5%
Improved	
Physically	19.9%
Mentally	13.6%
Unimproved	
Physically	11.8%
Mentally	17.0%
Intercurrent Diseases	
Contraindicating	8.4%
Insufficient Treatment	5.7%

- Dr Harold K. Marshall, MD, Assistant Physician, Gardner State Colony, Department of Mental Diseases, and Dr Charles E. Thompson, MD, Superintendent, Gardner State Colony, in "New England Journal of Medicine", 8 Sept. 1932.

The Commonwealth of Massachusetts, Department of Mental Health, Public Document N.30, Annual Reports of the Trustees of the Westborough State Hospital

1931 to 1935

Westborough State Hospital

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Edwin W. Smith, MD, Gynecologist
Ralph C. Wiggin, MD, Urologist

"New apparatus has been provided as needed including 2 complete modern outfits for Colonic Irrigation, and added facilities for Hydrotherapy." - in "Annual Report of the Trustees of the Westborough State Hospital", 1931.

"Hydrotherapy facilities have been extended, and in the form of continuous bath treatment, neutral pack and Colonic Irrigation constitute one of the most valuable methods of treatment of mental cases." - in "Annual Report of the Trustees of the Westborough State Hospital", 1932.

"Our Hydro-Therapeutic facilities have been increased and are used to the fullest extent principally in the forms of continuous bath treatment, neutral packs and Colonic Irrigations, these measures having been found through long experience to be the most valuable in the treatment of mental cases." - in "Annual Report Westborough State Hospital", 1933.

"A Ward Building for the accommodation of 204 women patients of the disturbed type.

As planned this building would be sound-proofed and air-conditioned and would contain ample facilities in the way of continuous baths, pack units, Colonic Irrigation and other types of treatment useful for this class of patients." - in "Annual Report Westborough State Hospital", 1934.

Chapter 39

Therapeutics

*"**Restoring the System to a Healthy Tone, meeting the various disorders of Constipation, indigestion, Acidity, Imperfect Action of the Kidneys, and debility. I would even add to the list female disorders, when they are present, for they may, by Reflex Action.**" - Dr Lucius Duncan Bulkley, AM, MD, in "The Management of Eczema", 1875.*

The Epitome of Hydropathy in Mental Healthcare

"Dr Rebekah Wright, MD received her degree from Northwestern University Medical School, Chicago in 1896. For many years she was associated with the Massachusetts State Department for Mental Diseases as a consultant in Hydrology. Since 1 February 1945, she had been Consulting Hydrologist at the Connecticut State Hospital, Middletown. Was a member of the American Medical Association, the American Psychiatric Association, and the New England Society for Psychiatry." - in "The New England Journal of Medicine", 14 June 1945.

"Dr Rebekah Wright, MD (1873-1945) saw her 72 birthday on 24 March 1945, passed away, while actively engaged in Teaching Hydrotherapy, on the 29 of March 1945.

On 1 of February 1945, Dr Wright joined the staff of the Connecticut State Hospital as Consulting Hydrologist, and from that date until her death devoted her entire time to the Training of Hydrotherapists, and assisted me in working out future plans for a modern Hydrotherapy Suite.

The day preceding her death I had the privilege of discussing future plans with her for about an hour, during which she showed the same keen interest and enthusiasm in her work, which I have known for the past 24 years.

She told of her ideal plans for teaching and organizing Hydrotherapy Centers in the United states, where the work she so ably started and championed could be perpetuated.

Even up to the last she was planning on meeting with the director of the Baruch Committee on Physical Medicine, to discuss the publication of a Monograph on Hydrotherapy in relation to psychiatry "The Epitome of Psychiatric Hydrotherapy".

The name “Wright” was a household word to all in psychiatry, and her monumental work, “Hydrotherapy in Psychiatric Hospitals”, will go down in medical history, doing honour to its author.

Because of her interest in human beings, entered Northwestern University in Chicago, Illinois, from which she received her degree of doctor of medicine in 1896.

Following her graduation from medical school, she spent 1 year interning at Wesley Hospital in Chicago.

She next turned her attention to psychiatry, and was appointed to the medical staff at St. Elizabeths Hospital in Washington, D.C., where she remained until 1906.

Having gained a better understanding of human nature, she entered private practice in Des Moines, Iowa, but remained only a short while because of her interest in Hydrotherapy, and the desire to learn more about this speciality. Then **went to California, where she received a Special Course of Training in Hydrotherapy, under Dr Simon Baruch, “the father of Hydrotherapy in America.”**

From 1907 on she devoted all of her time and efforts to Hydrotherapy, with particular emphasis on its application to persons afflicted with Mental Illness. In this field she won recognition as a specialist, becoming famous throughout the United States and Canada.

Many States in the Union retained her as a Consultant in Hydrology, because she was one of the few physicians in the country who had made so thorough and extensive studies of the application of Hydro-Therapeutic Procedures.

Her services were in constant demand because of her exceptional ability in Teaching Physicians and training personnel who later became qualified as expert technicians.

For many years she served as Consulting Hydrologist for the Massachusetts Department of Mental Health, in which capacity she planned and organized Hydrotherapy Departments for All Hospitals under its control.

One of her latest achievements was the preparation of a cinema entitled, “Applied Hydrotherapy.”

The techniques depicted in this work are of inestimable value to physicians who lecture on the physiological effects of heat, cold, revulsion, neutral bath and friction, and have saved many hours rehearsal for demonstration of the Hydro Therapists time. She has a gift for friendship. She was loyal to her friends, and has sincere humanitarian interest in the mentally ill, whom she was for ever starving to help. She never lost friendships with the hundreds of young men and women whom she personally Trained has Hydrotherapists.

She loved life, and got much out of it, for she was guided by the Golden Rule (principle of treating others as one would want to be treated by them).

Her personality was a dominant example of all who knew her, was energetic ever optimistic, and had the faculty of being persistent in what she believed was right, was dynamic, had the courage of her convictions and the spirit of a pioneer.

She was a clear thinker, always said what she thought, and meant what she said, loved nature, had a profound interest in music and art, and enjoyed the finer thing in life. **Dr Wright was honoured by many Scientific Societies and was in constant demand as a Lecturer and Teacher.** Was a Fellow of the American Psychiatric Association, American Academy of Physical Medicine, New England Society of Psychiatry, Massachusetts Psychiatric Society, Massachusetts Medical Society, New England Society of Physical Medicine, International Society of Medical Hydrology.

She belonged to the great period of the making of Hydrotherapy, and was numbered among the builders who had laid the cornerstone.

A truly great woman, after devoting her life to a great cause." - Dr Edgar C. Yerbury, MD, in "The American Journal of Psychiatry", May 1945.

The Hydro Therapeutic Treatment Is Absolutely Indispensable

"Hydro Therapeutic Treatment has been utilized this year more than ever before, both for the reason that we have had this year under care an ever-increasing number of disturbed who required treatment, and because of the efforts of Dr Rebekah E. Wright, Hydrotherapeutist of the Department of Mental Diseases, who spent several weeks with our staff.

The following Treatments have been given in this Department:

Tonic Treatments, 3,431.
Continuous Baths, 213.
Wet Sheet Packs, 1,555.

Hydrotherapy, which has been an Important Therapeutic measure here during the past 30 years, was used in an increasingly large number of cases. Opportunity for such increasing use was afforded by the opening of a suite of rooms in the new fourth halls on each side of the hospital, equipped with tubs, pack tables, and rest rooms.

We were especially fortunate in having with us again.

Dr Rebekah Wright to give our nurses another extensive Course in Training. The matter of properly cooking and serving food not only is necessary to the physical welfare of the patient but is no small factor in creating a better spirit and morale and in a way adds to the therapy.

When this Hospital was constructed there was inadequate equipment of Baths, Toilets and Lighting.

This year an appropriation of $10,000 will permit us to **install proper Bathing & Toilet Facilities on 2 of the large disturbed wards accommodating 350 patients.**

I believe it is the plan to give a similar sum each year until all the ward buildings are well equipped in this respect.

I am in hopes that an appropriation will be given this coming year to improve the lighting facilities.

The present system of lighting is of the drop cord type, is expensive and gives very poor results.

An improvement in the lighting will add to the appearance of the wards and materially add to the comfort of the patient and will bear a good interest on the investment.

The Board of Trustees of this hospital as long as 14 years ago recognized the necessity of having special treatment centers and through their efforts the present infirmary building was erected.

A splendid operating room suite took care of the surgical needs of the patients. **A dental office arranged for the necessary care of patients' teeth.**

Later a laboratory was installed in the basement of this building.

A few years later we were able to get 5 Suites of Continuous Baths, and at the same time a Hydriatric Room.

Hydrotherapy Is Absolutely Indispensable.

This year we were able to purchase physiotherapy equipment consisting of 2 bakers, Ultra Violet Ray machine, Diathermy machine, a Morse wave generator and a Zoalite.

A special room for this is already being constructed in the basement of the I-building.

The Hydriatric room with its Tonic Baths, is in two thirds of this basement and the physiotherapy room will be in the other third. This gives us a splendid central treatment unit." - in "Report of the Massachusetts Department of Mental Diseases", The Commonwealth of Massachusetts, 1924.

Review of the Book: "Hydrotherapy in Hospitals for Mental Diseases", by Rebekah Wright, MD, 1932

"So far as the reviewer is aware, this is the only book that has been published in recent years dealing exclusively with Hydrotherapy.

Its objective is to present in concise detail the Technic of Hydriatic Procedures that have proved practicable in the Massachusetts Department of Mental Diseases. The material is divided into 4 parts.

The first is for the benefit of Nurses, Instructors, and Hydrotherapeutists; the second for Hydrotherapeutists; the third for physicians, and the last, for Superintendents.

The subject is well presented, and the illustrations are everything that is desired.

This work should prove to be of the utmost help." - in "Archives of Neurology and Psychiatry", July 1933.

Book for Workers in Mental Institutions

"Hydrotherapy in Hospitals for Mental Diseases," by Dr Rebekah Wright, Hydrotherapeutist, Massachusetts Department of Mental Diseases, is designed to present in concise detail the technique of the Hydriatic Procedures that Have Proved Practicable in Hospitals for Mental Diseases, to instruct Hydrotherapists in accurate recording and in the management of the Hydro-Therapeutic Department, to outline for psychiatrists the Hydro-Therapeutic indications in conditions which accompany the various psychoses, to emphasize the importance of precise prescriptions and accurate records and to offer suggestions for the construction and equipment of Hydriatric suites.

The book fulfils this purpose admirably.

The book is divided into 4 parts.

Part 1 is for Nurses, instructors and Hydrotherapists, and covers **the importance and scope of Hydrotherapy in hospitals for mental diseases, anatomy and physiology of the skin, physiologic effects of cold and heat, local and general applications of heat and cold, revulsion, neutral applications, friction and irrigations. Among the 50 procedures that are recommended, the technique and effects of the Wet Sheet Pack, Compresses, Electric Light and Vapour Baths, Sitz Bath, Continuous Bath, Salt Glow, 7 forms of the Douche, gastric lavage and Colonic Irrigation, are discussed in detail.** The section is illustrated with 55 pictures of procedures, 3 of fabrics and utensils, 3 anatomical drawings, and 3 radiographs.

Part 2 is for Hydrotherapists. The technician is advised in regard to costumes, water supply, demonstrations, daily preparation for tonic baths, the occupation and entertainment of patients, and the handling of emergencies. Chapters on housekeeping and records and reports are of particular value to the Hydrotherapist.

Part 3 is intended primarily for physicians, and in the short space of 52 pages Doctor Wright has condensed the essential Hydrotherapy information with which all physicians dealing with mental diseases should be completely familiar. Hydrotherapy for conditions occurring in the various psychoses is outlined in detail, particularly as to temperature, duration and frequency of the treatments.

Part 4 is intended for superintendents, and deals with the subject of construction and equipment for Hydriatric suites. The suggestions are based upon the author's 25 years experience in cooperating with architects and superintendents in the planning of tonic bath and sedation suites.

There are 28 cuts and drawings of fixtures, 3 plans of recently constructed Hydro-Therapeutic Departments and 3 model plans which can be used for such departments." - Dr William A. Bryan, MD, Superintendent, Worcester State Hospital, Mass., in "The Modern Hospital", September 1933.

Review of the Book: "Hydrotherapy in Psychiatric Hospitals", by Rebekah Wright, MD, Hydrologist, Massachusetts Department of Mental Health, 1940

"This revision of a 1932 edition devotes the introductory chapter to a historical sketch of Hydro-Therapeutic Principles established during the last few centuries. **Here one learns of the experiments which demonstrated that a cold bath may produce a mild leukocytosis or a material increase in the circulation of the red blood cells.**

The book is splendidly illustrated to make clear the nature of equipment or technics that may be employed to produce such effects as sedation, relief of pain, reduction of fever, elimination and stimulation — all to be accomplished by water used in one way or another.

The need for accurate prescription writing is stressed.

One section is especially given to the task of teaching physicians the fundamentals of this art.

The physician who would master it must be a clinical physiologist as interested in the effects of heat and cold as he would be in those of digitalis or other drugs.

There is brief discussion of **the treatments of choice for various psychiatric syndromes.**

One is greatly impressed by the importance which the author attaches to the skin as a vital organ that may be affected by heat or cold through the medium of water applied in many ways, with the aim of:

1. **Relieving Tension,**
2. **Dissipating Vasomotor Imbalance, or**
3. **Relieving Localized or General Discomfort.**

A psychiatric hospital is not basically equipped unless it has personnel and facilities for administering the cold wet sheet pack (sedative), or the continuous (prolonged) neutral tub bath.

The descriptions and illustrations pertaining to these, among many other technics, are excellent.

For the physician, the nurse, the attendant, the professional physical therapist there are chapters of special interest.

Floor plans of Hydriatic Departments, records, reports, housekeeping, special training.

Supplementary references and a complete index add to the usefulness of the book.

It is a book to be commended to the personnel of psychiatric and General Hospitals." - in "Journal of the American Medical Association", 5 April 1941.

"One of the favourite questions of the late Dr Douglas Singer, in his examination of candidates for professional recognition in psychiatry, was an extremely simple one:

It consisted merely in requesting the candidate to outline, in detail, his orders to his nurse for a Continuous Bath.

The varied and often startling replies indicated only too clearly that men fully trained in psychopathology and case management were tar too often content to rely solely on their physiotherapists for their Hydrotherapy.

It is precisely this state of affairs which D**r Rebekah Wright has set herself to remedy, by giving the physician the information with which to prescribe Water Treatments intelligently and precisely.**

Her book, which is based on years of experience, and is a revision of a volume first published nearly 10 years ago, is so minute in its description of methods that it is a valuable text for the nurse, and is also so comprehensive in its discussion of indications, contraindications and dangers that it rightly belongs in the library of every practising psychiatrist.

Throughout the book emphasis is placed on record keeping, and on the importance of individual prescription, so that it is possible by its use to evolve in each case a thorough scheme of Intelligent Treatment.

There are chapters on the planning of Hydro-Therapeutic Installations, which, as has been pointed out by Dr May in the foreword, is the responsibility of the physician in collaboration with an architect, rather than that of the architect alone.

Two-thirds of the text is devoted to descriptions of specific procedures in detail, and about one quarter to a section for physicians containing suggestions for the use of the various therapies described.

While it is intended that practical demonstrations, with or without moving pictures be used in training physiotherapists, numerous illustrations amplifying the written matter are more than adequate for the physician's understanding of the techniques employed.

Altogether it is an excellent book, which should be compulsory reading for all interns entering a psychiatric service, as well as being a useful reference for their seniors." - Dr Leslie R. Ancus, MD, Neuro-Psychiatric Institute of the Hartford Retreat, Hartford, Conn., in "The American Journal of Psychiatry", July 1941.

Dr Rebekah Wright Retires From the Massachusetts Service

"The Hospital world is familiar with the Authoritative Manual Hydrotherapy in Psychiatric Hospitals by Dr Rebekah Wright, MD, Hydrologist to the Massachusetts Department of Mental Health, the most recent edition of which was published in 1940.

After 2 years in the Massachusetts service, much of which time was devoted to **the Development and Teaching of Scientific Hydro-Therapeutic Procedures in the State Hospitals**, Dr Wright has now retired.

She will continue her consultation work and will be available for Lectures and Instructional Courses in Hydrotherapy." - in "The American Journal of Psychiatry", September 1941.

Hydropathy in The Treatment and Cure of Mental & Nervous Ailments

"Dr Rebekah Wright, a pioneer in applying Hydrotherapy in the Treatment and Cure of the Insane.

Dr Wright practiced in the field of Hydrotherapy psychiatry for 50 years, perfecting many techniques in applying Water Treatment for Curing the Mentally Ill.

In the last 6 years she travelled all over the country as a consultant in psychiatry.

In February 1945, Dr Wright was voted a grant of $1,000 to prepare a monograph on Hydrotherapy to be published under the title of:

"The Epitome of Psychiatric Hydrotherapy"

For 25 years, until 1939 she was attached to the State Department of Mental Health in Massachusetts as a Consultant in Hydrology for all the State's Hospitals for Mental and Nervous Ailments.

She retired 6 years ago from Massachusetts civil service to extend her consulting activities into national fields." - in "The Journal of Nervous and Mental Diseases", 1945.

Simple Remedies

"In spite of the large number of new Drugs introduced, the old and simple remedies are able to hold their own.

If an attempt were made to write a book on Materia Medica in the present day which should include all the preparations and drugs introduced and tried in veterinary medicine, it would indeed be a mighty tome.

On considering the matter one would be excused for inquiring how it is that a market is found for the enormous number of preparations and remedies which are so freely advertised.

Probably a solution of the question would be that many practitioners believe the statements put forth by the manufacturers, and prescribe accordingly.

It requires a distinctly skeptical mind to judge accurately as to the therapeutic value of any medicinal agent.

A large number of observations are essential and the vis medicatrix naturae must be sults obtained. When we come to judge between the value of one drug and another in the treatment of any disease, a similar difficulty presents itself.

Unfortunately the tendency is to draw conclusions on evidence derived from a few cases and to **overlook the natural powers of recovery.**

We learn much from contract practice, as in this the minimum amount of drugs is prescribed and these are usually of a simple nature.

The complex medicinal agents are too expensive.

Yet how do the results compare with the practice in which expense is no object?

So far as we can judge, the recoveries are quite as numerous and as satisfactory. The difficulty in the diagnosis of many diseases indicate that until **we are able to ascertain the real nature of a case, it is wiser and safer to prescribe simple remedies rather than powerful drugs possessing complex actions.**

Of late years views on therapeutics have been greatly modified and although the orthodox believers in the virtues of drugs still exist, they are becoming fewer in number.

Take, for example, the prescribing of drenches for horses.

Except in cases of colic, drenches are now seldom employed by practitioners who take the trouble to think and to observe. Formerly cases of influenza and respiratory affections were liberally "drenched" with alcohol and febrifuges, and no one questioned the dangers and inutility of the procedure.

It was the recognized routine and custom, and unless carried out practitioners feared that the patient was neglected or did not get a chance for his life.

However, some practitioners who had original ideas and were sufficiently bold to put them to the test, relinquished "drenching" and the long array of medicinal agents.

Hypodermic medication employed with discretion came into vogue, and **subcutaneous injections of normal saline solution** took the place of whiskey and ale as stimulants. **To these may be added the good effects of plenty of open air, and the net result is a far greater number of recoveries.**

Simplicity in therapeutics is the order of the day, and the "shot-gun" prescription is now abandoned by practitioners who have the will and the capability to observe and to study "cause and effect."

In the Treatment of Colic, it is now recognized that simple cases tend to recover spontaneously or with the assistance of a diffusible stimulant. In practices where at one time large amounts of opiates were used, the bill for such agents is now reduced to a minimum.

The time-honored Oil of Turpentine forms an Efficient Remedy for Colic, and it has the advantage that if the case happens to be of a more serious nature than anticipated, the drug does not prove inimical to recovery.

Bicarbonate of Soda is a simple agent which often proves useful in doubtful cases, and in others, if it fails to achieve good results, it, at any rate, does no harm.

Calomel (purgative) is another drug which, if used with discretion, has its uses, and although condemned for a time owing to its indiscriminate employment by our ancestors, its value is in cattle practice.

The homely common Salt is largely employed and its value when given in the form of electuary in many gastric affections is amply demonstrated.

In the treatment of Red Water (causes the urine to develop a red colour), common Salt, if given sufficiently early, proves of marked value although we are not aware how it combats the attacks of Piroplasma.

Examples might easily be multiplied which would tend to show how largely a practice might be conducted with a few simple, cheap agents, in conjunction with Pure Air and attention to Dietetics.

Similar remarks apply to surgical therapeutics.

Given good drainage of wounds, a healthy patient, clean again becoming recognized. Given a strong patient and healthful surroundings, and a dresser who recognizes the necessity for surgical cleanliness, it matters little what form of antiseptic we employ. Under opposite conditions, the most potent germicides will fail to achieve good results. One may anticipate that in the future simplicity in treatment will supersede many of the present methods.

The treatment of "milk fever" in cows is an example.

Could anything be simpler?

No drugs, just the simple inflation of the udder with air.

Yet so wedded are some practitioners to drugs, that they must needs employ the hypodermic injection of atropin or adrenalin as an adjunct to air, and try to persuade us that better results are obtained.

Of course the treatment is too simple for display, hence the desire for complexity. Some go further and cry out for a solution of the problem of how the air acts, and desire to ascertain the pathology of the disease. We hardly think their curiosity is likely to be satisfied, and we are quite positive that no cheaper, or more effective therapeutic agent than air will be discovered. - The Veterinary News." - in "Simple Remedies", American Journal of Veterinary Medicine, 1916.

The Biological & Therapeutics Effects of Medicinal Plants

Activation of enzymes
Analgesic: Relieves pain
Anodyne: Relieves pain
Anthelmintic: Expels or kills worms
Antihistamine: Relieves the symptoms of allergies
Antipyretic: Counteracts fever
Antiseptic: Counters infection
Antispasmodic: Relieves cramp
Antitussive: Relieves coughing
Antiviral
Aperative: Stimulates appetite
Astringent - causes constriction of tissues
Bacteriocidal - kills bacteria
Bitter - stimulates gastric function
Carminative - expels flatulence, normalises gut motility
Cathartic - Purgative
Choleretic - stimulates production of bile
Contraction of uterus
Demulcent - soothes mucous membrane
Diaphoretic - promotes perspiration
Diuretic - increases flow of urine
Emmenagogue - promotes menstrual discharge
Emollient - soothes the skin
Estrogenic -stimulate the development and maintenance of female secondary sex characteristics
Expectorant - promotes release of phlegm
Febrifugue - reduces fever
Galactagogue - increases milk flow
Gynotermone - caused the cells to become female
Heart stimulant
Heart depressant
Hypertensive: Reduces hypotension
Hypotensive: Reduces hypertension
Increase in alkaline reserve
Increase of respiratory movement
Inhibition of antibiotic
Inhibition of bactericides
Inhibition of enzymes
Inhibition of muscle action
Inhibition of oxidation in fat
Laxative: Relieves constipation
Nervine: Heals nerve tissue
Oxido-reduction of cytochrome c
Potentiation of epinephrine
Protection against frostbite
Protective against irradiation
Protection of islets of Langerhans
Reduction of iodine in thyroid
Relaxant: Relaxes tissues
Rubifacient: Causes redness, inflammation of skin
Sedative: Lessens nervous excitement and functional activity
Soporific: Produces sleep
Spermicidal: A substance or agent that kills spermatozoa, especially one used as a contraceptive.
Stimulant: Promotes energy, increases circulation
Strengthening of capillaries
Styptic: Stops external bleeding
Tumour reduction
Vulnerary: Promotes wound healing

The Essence of Osteopathic Practice

"One of the striking features of Dr Still's art, is his intensive palpation.

He early came to the conclusion that the body organism is complete, that the properties of self-repair are either actively or potentially at one's command if he but knows how to liberate the forces. Of this, he is absolutely convinced.

For his experience includes innumerable instances over a long period of time and embraces a wide range of disorders.

The Osteopathic problem resolves itself to one's ability to adjust successfully the disordered mechanism.

But the adjustment in itself is a minor problem.

The crux of the matter rests upon one's definite knowledge of anatomical data.

To Dr Still, **anatomy means something far more than descriptive texts of the dead house findings. It is inclusive of physiology and histology.**

For what does mere verbiage of macroscopic tissues amount to if the functioning organism is not included?

Structure and mechanism is of little use if the dynamics, the living forces, are absent.

To know the living body from the conception of the tactual sense, to know how the tissues feel and react tactually, this is the special desideratum.

This takes into consideration something vastly different from structure or a mere machine. Foremost in therapy, though directly associated with structure, is function. Without function the organism is a thing of the past.

Though the physics and chemistry are expressed in mechanical terms, still there are attributes that carry mechanism beyond the cold confines of a mere machine.

It is the properties of the vital organism, as revealed through tactual discipline, the tone, mobility, temperature, and resistance of tissues, not alone structural position and relation, that demand no small part of tactile efforts.

All of these are in one sense structural or mechanical expressions, to be sure. But upon the other hand they are in another sense removed from mechanism as we ordinarily understand it (which, mechanism, after all, may only be a simple method of explanation), for they are part and parcel of living phenomena.

That is, there is a subtle regulatory system that, at the present time at least, is most difficult to explain in terms of mechanism.

Test tube and microscope have their places as instruments of precision, but they can not supplant a certain definite invaluable knowledge that is obtained by the educated tactual sense. This knowledge is of foremost consideration in actual practice. **It distinctly reflects the status of the life-giving forces.**

In the final analysis, all methods must be co-ordinated, not in the abstract, but in their application to the concrete case.

Consequently with Dr Still's conviction that the body is a complete vital mechanism, physiologically unified, it is not surprising that with him the necessity of tactual education is stressed to the point of a martinet.

Of this necessity there are no qualifications or howevers.

It is absolutely insisted upon.

For in no other practical way can the art of Osteopathy be attained.

And probably right here is our most serious lapse as a profession, individually and collectively.

The very essence of Osteopathic science and art comprises the etiologic diagnosis.

The conception is simple and rational enough in theory, but so difficult in practice.

Reducing each and every treatment to an individuation, not formula, demands creative endeavour, and requires painstaking and exhausting effort.

The pulsating, life-giving tissue, with its many possible gradations, must actually be felt with the educated hand in order that appreciation of its functional integrity may be determined.

All diagnostic methods at best are crude and probably will always be so.

But this does not preclude that there are certain invaluable measures to be prosecuted.

Dr Still says that probably each tissue is to a certain extent a creator of its own fluid substances. This has been proven by recent experiments.

It goes to show that there is a most practical importance attached to the tactual effort, that to the educated touch invaluable data may be elicited.

This is definitely shown in our every day work.

Not only can one sense the status of local tissues directly, but there is also the reflected expression of the mechanisms that make up the concatenated organism.

In elucidating the significance of circulatory, nervous and chemical regulatory mechanisms Dr Still propounded some of his greatest discoveries, that today are being fully vindicated by experimental work.

He always sees beyond the part; physiological unification along normal lines is his practical goal. Most important of all has been the practicalness of his efforts.

Definite results are secured.

At one period in the history of the parent school Dr Still practically did all of the examining of patients.

He was not specially concerned with the symptoms, although these did not escape notice, but he was concerned with the signs.

He personally saw the student's mind was Osteopathically educated through his finger tips.

Taking the student's fingers in his and specifically revealing or pointing out, and feeling, the lesions and contrasting the same with normal tissues for months at a stretch was his favourite method.

And interspersed with this procedure were his many fundamental physiological conclusions which have been verified in later years. It required several months of daily practice before he was satisfied that the student could begin to ascertain through the tactual sense what he should find out.

The tactile or palpation corpuscles can be wonderfully developed.

This is the point of view that is so essentially Osteopathic, and which is so elusive if the necessary educational ground work is not forthcoming.

And still to put it into practice is difficult.

For so much of our present day literature, at least, and the vast bulk of medical writings, deals with symptoms and Post-mortem pathology.

The actual Osteopathic pathology of the living should demand more of our attention and study.

This is not saying that other things are not of value, but it is emphasizing the point that relative proportions are hugely distorted.

We are not lacking in theory, and which is receiving added support from many quarters, but it is safe to say that every one of us falls short in etiologic diagnosis of our art. And this is the very thing that determines our success.

How many of us ever stop, and think how absolutely revolutionizing the Osteopathic viewpoint is?

It is so clear cut and logical, in fact, exceedingly practical when once attained.

The difficulty arises in divorcing ourselves from preconceived ideas of which medical coloration comprises no small portion.

The contrast of data between the really Osteopathic with that of the so-termed medical is so sharp and common sense that nothing else can so clearly reveal the genius of Dr Still.

Every day technique is a definite index of one’s Osteopathic conception.

If an Osteopathic diagnosis is really made there can never be even to the uninitiated any semblance of routinism.

Starting with the theory of Osteopathy, which from its wide and fundamental biologic viewpoint must needs give a new and added value to every subject in the curriculum, the chief reliance of student as well as practitioner must always be in anatomy and physiology.

The living body should be interpreted by this scale; all other measures are subsidiary.

This is the Osteopathic yard stick and nothing else will suffice.

A laboratory diagnosis, for example, amounts to but little to the practitioner unless it is interpreted individually and in conjunction with other factors elicited of the patient.

The law of averages and statistical deductions are no more absolute than routine technique.

Every case must stand out as a distinct and definite problem.

This is a point that Dr Still has always insisted should be clearly understood.

The native ability of a student always means far more to Dr Still than traditional influence or formula.

In fact the latter tends to stultify effort.

He clearly saw the pitfalls of both tradition and imitation.

Nothing can warp one’s judgment like tradition, though in certain instances it may serve a useful purpose.

For individual premises are revealed in every problem.

And an art that is based upon imitative effort can rarely succeed, for art means creative endeavour. Here, is the essence of Osteopathic practice.

There can be no repetition in a series of cases from the very nature of things.

Every instance stands out sharp and clear-cut, depending upon problems presented, of which no two can be alike, and thus demanding a different application of the principles involved. This requires art, science, skill, dexterity.

This, to Dr Still, is Osteopathy.

This is the great reason he was so reluctant to have any one try to imitate some technique manipulation.

He clearly foresaw its dangers.

He undoubtedly saw that the spirit of tradition dominated medical practice, and he fought hard to get away from it.

For if the fundamentals, the basic principles of Osteopathy, are correct the successful practitioner must by virtue of this, by absolute necessity, account by his own ability in solving the many and varying applications of the principles at the bedside.

Manipulation can never be anything but a means to an end.

Etiologic diagnosis is the guiding star.

Thus in his practical work he always came back to the anatomical study.

This is the bedrock upon which the values will be found.

Anatomy is not something to be studied, laid aside, and then forgotten.

It is the source of eternal therapeutic knowledge.

To apply an art demands a definite preconception of the thing applied.

Otherwise the technician can not be anything else than a bungler.

Certainly routine technique is not an art, but only a crude imitation.

This is not implying that systematic overhauling of the mechanism is routinism.

There is almost as much difference between the two as between abortion and a full term delivery, I know that I am bearing down strongly upon this point.

But it is a feature that Dr Still emphasized for years.

"Engine wiping" was his proverbial red rag.

He so well knew that it was one of Osteopathy's great dangers.

The Osteopathic concept stands out so vivid and clear cut that if it is once thoroughly attained the student should never have any doubt as to the indicated method of procedure.

Manipulative skill is far from being the first thing to be desired, but instead skill in Osteopathic diagnosis.

Only by the latter can one develop a keenness of tactual sense that is so essential in practice. This is by all odds the first step to manipulative efficiency.

The second is a knowledge of mechanics.

Fundamental to both, is an understanding of minute living anatomy, and its physiological unification.

There is no royal road to such an attainment.

Even the practitioner of many years' experience is constantly perfecting his methods if he expects to continually improve his work.

This is one lesson that Dr Still taught that is irrevocable.

It is evident that there is only one way to thoroughly apply the Osteopathic art. And that is to know the living anatomy, how it looks and feels, and reacts to the tactual sense. Then one is in a position to make a study of the all-essential minutiae as revealed in each and every case.

The indicated mechanics, or manipulative technique, will offer its own solution if one has any mechanical ability.

Those who have had the great privilege of seeing the masterful work of Dr Still over a period of years know full well that his examination and technique have no qualities of the hit or miss, of general movements, and the like.

He is never satisfied until he is reasonably certain that the specific lesions have been located. Then he is just as particular in applying the individually indicated technique.

He never for a moment loses sight of minutiae, for herein is the key of the inception of pathologic processes." - in "A Glimpse of Dr Still's Art", Journal of the American Osteopathic Association, July 1917.

The Possibilities of Spinal Electro-Therapy & Hydrotherapy

"For more than 45 years **I have been proving the efficiency of the treatment of a large class of diseases by influencing the vasomotor agencies by cold or heat and positive or negative Electricity, alone or combined.**

The complications due to disturbances of the vaso-motor equilibrium are of 2 kinds:

1. Those resulting from an excess of vaso-motor activity.
2. Those due to vaso-motor paresis or inactivity.

The former class, which includes a number of very common conditions, is, in my estimation, best treated by the application of cold or the positive current, together or separately, over one or more segments of the spinal cord, nerve centers and ganglia on either side of the spine.

Without a doubt these centers have a decided and direct influence upon the peripheral circulation, being functionally related to some part of the body or its extremities. The treatment may be applied over the whole length of the spinal column or to localized areas dependent upon the emergency under consideration.

By the application of either ice or positive Electricity, or both, the blood circulation and nerve energy in the spinal cord is diminished and the circulation in the visceral cavities and their organs increased.

This procedure also gives warmth to the body and extremities, and causes a healthful equalization of the circulation throughout the whole system.

Here follows a brief, summarized statement of my idea of the principles involved by this method of treatment and its possibilities.

The chief function of the sympathetic ganglia consists in the regulation of the diameters of the blood vessels throughout the body. When these ganglia are in a state of maximum hyperemia, the nervous impulses from them to the muscular coats of the arteries, and arterioles to which they are severally related, stimulate them so excessively that a condition of tonic spasm is often induced, which is often so intense as to shut off a large proportion of the blood in the peripheral arteries. Cold, or the positive current applied along the spine will subdue cramps or excessive tension of both the voluntary and the involuntary muscles, will lessen sensibility, diminish secretion and, while increasing within certain limits the general circulation and bodily heat, is capable by prolonged use of lessening cellular nutrition. When the Spinal Cord is in a state of hyperemia, cramps of the involuntary muscles surrounding the Alimentary Canal, Cramps or even convulsions of the voluntary muscles, excessive Glandular Activity and excessive sensibility (hyperesthesia) are likely to ensue.

Sensibility can be lessened, and pain abolished by exercising a sedative influence on the spinal cord by the application of ice or positive Electricity, or both simultaneously. Disorders of the voluntary muscles of a spasmodic or convulsive character are quickly and powerfully counteracted by Ice, or positive Electricity applied to the spinal column. Disorders of the involuntary muscular structure consisting of excessive contractions or tonic spasm, as well as of morbidly excessive relaxation of the same structures are controllable to an astonishing extent by application of Ice or positive Electricity to the spine.

Disorderly and excessive action of Glands, or Glandular surfaces may also be corrected by the exertion of these sedative influences over the nerve centers functionally related to them.

The idea as well as the practice of lessening secretion by diminishing the circulation in the related nerve centers is not generally appreciated by the profession, and I desire here to impress the following facts:

Morbidly excessive sweating, bronchorrhea, the excessive action of the alimentary mucosa, constituting a common cause of diarrhea.

Excessive action of the kidneys and spermatorrhea have been restrained over and over again by the use of Cold or Electricity properly applied to the appropriate part of the spine. The fact that excessive secretion of urine may be arrested by the application of a spinal Ice Bag, or Electricity, has not yet been mentioned in the literature by anyone; but, nevertheless, it is a fact as real as any of those cases which have been shown to others and in proof of which I am able to offer the testimony of several medical witnesses. **I have also repeatedly demonstrated that this method exerts a valuable restraining power over the morbidly excessive secretion of the spermatic glands.**" - Dr Morris Hale, MD, in "The American Journal of Physiologic Therapeutics", November 1910.

"All Secreting And Excreting Structures Are Essentially Glandular." *- in "Materia Medica; Or, Pharmacology and Therapeutics", 1858.*

"What we think and feel and are, is to a great extent determined by the state of our Ductless Glands and our Viscera." *- Aldous Huxley, in "Collected Works", 1957.*

The Usefulness of Osteopathy in Resolving Disease

"The physician must be experienced in many things, but most assuredly in rubbing." *- Hippocrates, in "Epidemics", Book 1, Chapter 11.*

"Muscles are traditionally overlooked as a Causative Factor of Disease.

This omission is curious considering that the body's 696 muscles comprise (ore than 40% of a person's body weight. Muscles deserve more attention as a Causative Factor in child's chronic conditions. In my years of clinical practice, virtually every patient has said that his medical doctors rarely touched his muscles, let alone conducted a complete muscular evaluation. Unfortunately, physicians and nurses may not have been trained to feel the differences between normal and damaged muscle tissue. When restricted, contracted, dehydrated or congested (toxic) muscle tissues are corrected, your child's health can show a significant improvement." - Dr Barry Gillespie, Dentist, in "Healing Your Child: Natural Care for Children with Chronic Illnesses", 1999.

"Nature will do its work of repairing in due time. If we dislocate a shoulder, fever and heat will follow. The same is true of all limbs and joints of the body. If any obstructing blood or other fluid should be deposited in quantities great enough to stop other fluids from passing on their way, Nature will fire up its engine to remove such deposits by converting fluids into gas. As heat and motion have much to do as remedies, we may expect fever and pain until nature's furnace produces heat, forms and converts its fluids into gas and other deposits, and passes them through the excretories to space, and allows the body to work normally again." *- Dr Andrew T. Still, MD, DO in "Philosophy of Osteopathy", 1899.*

"The Artery is the father of the rivers of life, health, and ease, and its muddy or impure water is first in all disease. Disease is only allowed to exists if there is some obstruction to health such as impaired Circulation of Blood, Lymph, or Nerve Forces. Remove all obstructions, and when it is intelligently done, nature will kindly do the rest." *- Dr Andrew Taylor Still, MD, DO*

The Osteopath Need Only Remove this Obstruction, and the body would then naturally heal itself.

Dr Still, taught that when a bone or vertebra is slightly out of position there is also a strain on the surrounding tissues including the ligaments, muscles, blood vessels, nerves, and lymphatic vessels.

This strain causes a decrease in the local circulation of fluids and alteration of the nervous impulses.

Disease May Results when Tissues and Organs:

1. Do not receive sufficient Arterial Blood supply to provide them with Oxygen and Nutrients.

2. Do not have properly balanced nervous supply to regulate and coordinate their function with the rest of the body.

3. Do not have adequate Drainage through the Veins and Lymphatics to carry away their wastes.

> ***"Strange things happen to the Heart when the Chest is Deformed.***
> ***There is an end of our pretending to calculate what its condition may be by listening, and feeling, and percussing. Its sounds, and impulses, and resonances, be they what they may, are now worth nothing at all as guides to diagnosis.***
> ***The Heart is dragged from its proper seat and imprisoned in some strange place, and perhaps turned almost topsy-turvy by the encroachment of the vertebral column and approximation of the ribs. And thus cramped and hooped about with bone, at every movement it gives a jar that may be felt and a sound that may be heard in every part of the chest; and this sound which is thus conveyed to a distance is seldom the natural sound, but a loud whiz, the same in kind and the loudest in degree which belongs to mechanical impediment from valvular disease.***
> ***And mechanical impediment there is, but valvular disease there is none.***
> ***The weight and pressure which the heart or its large vessels sustain from the hard framework of the chest raise the impediment, and throw it in the way of the Circulating Blood."*** *- Dr P. M. Latham, MD, Physician to the Queen, in "Lectures on Subjects connected with Clinical Medicine", 1945.*

The Usefulness of Materia Medica in Resolving Disease

"The quality in the plant's leaf, root, or berry, which, when taken as medicine, acts on the internal organs, is the force in that plant, liberated through the digestive process." *- Prentice Mulford, in "Thoughts are Things", 1889.*

Treatment & Prevention of Insanity

"The preservation of the physical health, and the removal of all Foci of Irritation in those who are predisposed are points of utmost importance in the prevention of insanity. There is probably no branch of our profession in which a wide knowledge of general medicine is more essential, than in that which treats of the disorders attacking the mind.

The Metabolism of the Nervous Tissues is as yet but little understood and therefore the possibility of Faulty Metabolism being an important factor in the production of various insanities is a point which should not be overlooked.

Perhaps some day the causes of the many so-called Auto-Intoxications, or Autogenic Poisons, and Their Effect on the Nervous System will have a more definite explanation and this may help considerably in the prevention and treatment of insanity.

How much the products of retrograde metabolism, and their retention in the system are the cause and how much the effect of Neuropathic, and Psychopathic states. The best hospital methods and all available means are employed to assist Nature in restoring these to health.

They are furnished with all necessary modern appliances.

Departments for the use of Hydrotherapy, and Massage are now found in the various institutions, and on the whole much has been done to convert the Illinois state institutions from lunatic asylums, so-called, into hospitals for the treatment of the mentally sick.

We know that the Cardiovascular System, and the State of the Blood, the Organs of Digestion, the General Nutrition, the Functions of Elimination and Metabolism, all have important bearing upon the well being of the Nervous System. It is therefore very evident that all disorders of this nature should speedily be detected and removed in so far as the case permits.

The Usefulness of Neuropathic Massage

A commendable supplement is the use of Massage.

Good results are obtained, and tissue metabolism is encouraged.

Massage offers a substitute for the usual motions and activities of the body.

This passive artificial exercise is particularly indicated when rest and bed treatment must be prolonged and nearly absolute.

I have found it of the most value in the Depressions, Stupors (state of near-unconsciousness or insensibility), and Neurasthenic states.

Every institution should employ competent persons for the giving of Massage, who, in turn, should teach the pupils of the training school, so that it should come into prominent and practical use.

The greatest possible amount of Out Door Air, and Sunshine is as important in the Treatment of Insanity as in the Treatment of Most Other Diseases.

When the patient is able to leave his bed **the Greater Part of the Day Should Be Spent Out of Doors.**

The Usefulness of Light Therapy - Phototherapy

Phototherapy or Treatment by Light transmitted in various Colours, and the use of special colour effects in the surroundings of the patients, have been recommended as a means of help in the treatment of the insane. Some of the advocates of this form of therapy have been remarkably enthusiastic.

The claim is advanced that **certain colours have a soothing and calming effect upon the nervous system. The different shades of Blue and Violet are the most prominent colours employed for this purpose. Others are apt to increase psycho motor activity and restlessness, red being a prominent example. I have noticed was in the use of the blue or violet shades for the maniacal types.**

Most of these seem to get along better, and are more comfortable in blue surroundings. Departments intended for the acutely maniacal could be made more useful, perhaps, by fitting them out in blue, with window lights, electric globes, walls, ceilings, etc., to correspond.

The Healing Effects of Colours

> ***"Before reaching out into the unknown and invisible it was important to establish briefly the laws of the known and visible, the misapprehension of which has led scientists into various errors. Before being able to understand Light and Colour, with any exactness, it was absolutely necessary to investigate the working of atoms, and the general laws of the fine forces, so that we may not always have to move in the dark when considering them."*** *- in "The Principles of Light and Color", 1878.*

> ***"We know that Colour Influences us Emotionally. Blue, for example, has a Calming Effect on most human beings. Dr Andrew Stanway notes that in a study at the New England State Hospital, United States, 25 members of staff with normal blood pressure were bathed in Blue Light for just 30 minutes. A universal fall in blood pressure occurred. When Red Light was applied the blood pressures rose."*** *- in "The Healing Power", 1981.*

"Experiments have conclusively shown that we can "see" colour through our skin; we do not necessarily have to register colour with our eyes." The article "The True Colour of Healing" by Richard Thomas, on Colour Therapy, "Here's Health", January 1987. Reports on tests carried out in a New England Hospital, with 25 volunteers, including both blind and sighted people. It was found that a Blue Light lowered the blood pressure of all 25, until they ended up feeling almost sedated, while under a Red Light the same volunteers gradually began to feel active and even angry. Colour Therapists "are placing their faith in the latest discoveries in sub-atomic physics for justification of their work. For physicists have now established that all matter, including our organs, is really only energy. And energy works by vibration. "A cell in the human body, is like a battery, full of energy fields and vibrating in a microscopic energy sense." Since we now know that colours also have their own vibration, or energy field, it follows quite logically that colours can therefore influence our bodies. And this can happen whether or not we are actually looking at the colour", *explains leading researcher Dr Andrew Stanway." - in "The New Beacon", Royal National Institute for the Blind, February 1987.*

"I support the member for Hastings when he says that many people have testified to the value of the Treatment they have received from Colour Therapy. A personal friend of mine was given up by 3 Doctors. He could not eat or sleep. His back was doubled up, and he was on crutches, hardly able to move. A friend advised him to go to a Colour Therapist. Today he is a happy man, he can eat, sleep and walk about without crutches. These people can tell their own story to the Public Health Committee, and give their evidence." *- in "Physiotherapy Amendment Bill", New Zealand Parliament, 4 Nov. 1953.*

The Psychic Effect

The Psychic Effect of the Surroundings, upon newly admitted patients is of great importance.

The receiving ward should be made as pleasant and homelike as possible.

Everything that will reassure and encourage a patient and take away the appearance of custody, is beneficial, but care should be taken to keep within the bounds of safety.

The Selection of Pleasing Furnishings, such as rugs, draperies, flowers, etc., are points worthy of consideration as a means of psychic influence.

Ways and means should be liberally supplied to furnish amusement and diversion for the convalescent of the acute type.

Books, games, billiard rooms, etc., are of service in the wards occupied by the acute cases.

I have operated whenever I have been convinced that the indications were actually present, and have seen considerable resulting good.

The Usefulness of Hydropathy

Hydrotherapy, one of the Most Valuable of all Measures in the Treatment of Insanity, is now liberally used within the Institutions of the State.

Modern Hydro-Therapeutic Departments have been installed, and the results obtained are gratifying.

The use of water in the form of Baths, Packs, Sprays, etc., in the Treatment of Mental Disease, is not a new idea.

For years it has been recognized as a useful therapeutic agent in the insane hospitals of the old countries. In this country it is within limited years that it has come into use to any extent; in Illinois, quite recently.

Physicians engaged in the care of the insane should realize that the equipment of an institution is incomplete without a modern Hydro-Therapeutic Department.

There is no remedy used in the treatment of mental disease that will reach every case, but it is without doubt of decided value when rationally employed.

Hydrotherapy has brought about a decided decrease in the use of all kinds of restraint. It has made the use of hypnotic and narcotic drugs unnecessary in a great many cases.

It is of much value in assisting the functions of elimination.

In some of its special forms it is also valuable as a stimulant to the nervous system. Warm continuous baths and hot, neutral, or cold packs are very useful on account of their sedative effect: Stubborn and distressing insomnia often can be overcome by these measures.

Mechanical, manual, and medicinal restraint are frequently made unnecessary.

Many times **the periods of maniacal excitement are much lessened in duration by the use of these agencies.**

The pack is a very convenient measure, as it is readily used without the necessity of removing the patient from bed, and, if skill-fully applied, serves as a convenient restraint to the excited and restless patient, until its sedative effect is experienced.

The hot pack, the Russian, Turkish, and Electric-Light Baths are All Excellent to Stimulate Elimination, and Are Beneficial in the Toxic States. In the use of heat, however, one must never forget the possible danger of cardiac depression.

For this reason all forms of hot baths and packs should be given under the careful supervision of a competent person, and the physician should have an intelligent understanding of the cardiovascular system of the patient, before the hot bath, in any form, is ordered.

The different forms of cold sprays and douches have stimulating effect, and are usually of value following the hot bath. They are also beneficial in the stupid and depressed states, if used with care and for brief periods.

The most and the real value of Hydro-Therapeutic measures are found, however, in the use of the packs and baths intended for sedative and eliminative effect.

The Usefulness of a Healthy Diet

The Diet of the Acute Insane is an Important part of the Treatment, and it should be adapted to the physical needs and ailments of the patients.

Light and Nutritious Diet is generally in order in the average acute cases.

The digestion, in the greater part of the acute psychoses, is more or less weakened, and therefore light foods are indicated. We hear much discussion of the so-called "over feeding" in the treatment of the acute insane, just as in the care of the tubercular. **Overfeeding is at times a very harmful procedure.**

The patient's digestive powers must be first ascertained as we are apt to increase an already existing Toxaemia due to fermentation and putrefactive changes within the gastrointestinal tract. The maximum amount of easily digested, nutritious food, consistent with the patient's power of assimilation, ought to be the proper conception of a full diet. **Milk, eggs, light cereals, puddings, fruits, light vegetables and occasionally some well cooked meats, are the foods best adapted to the needs of the Acutely Insane. A liberal quantity of water is most essential,** and the nurses in charge should have specific instructions **to give the acute cases sufficient amounts of water at regular intervals.** The diet can be gradually increased as convalescence begins. **A Diet Nutritious but not too heavy is preferable for the chronically Insane and the quantity and kind of food should be gaged, more or less, by the daily amount of physical exertion and exercise of the patient. Those assisting in the labor of the institution should receive a larger allowance of meats than the ones doing but little manual work.**

The Diet of the Epileptic Insane should be especially watched with the view of preventing Gastro-Intestinal Putrefaction. There is much that can be done to make their lives more endurable and useful; much that will improve their mental state, and lessen the speed with which the deterioration of the mind progresses. Suitable occupation, handicraft, and other means of re-education, as well as amusements, music, and entertainment of various kinds should be faithfully and systematically employed, with this object in view.

Many patients apparently in the advanced states of dementia, with patience and perseverance, can be gradually awakened from their condition of mental lethargy and brought back to a life of comparative usefulness. Some even improve to such an extent as permits of a return to their homes. Institutions should possess ample teaching facilities. The various industrial departments, the farms, gardens, etc., should be used to the fullest extent. The wards should be liberally supplied with the means necessary to furnish mental employment of many kinds. The occupation of the insane requires careful study and supervision.

The work should be graded, and should be directed in accordance with the degree of intellect evinced by the respective patients. They act as a means of arousing the dormant mind, preparatory to the performance of some form of practical occupation." - Dr Eugen Cohn, MD, Assistant Superintendent, Anna State Hospital, in "**The Prevention and Treatment of Insanity**", Illinois Medical Journal, August 1910.

Spinal Manipulation Therapy

Spinal Manipulation Therapy is a technique that treats back pain, neck pain and other musculoskeletal conditions via the application of force to the spinal joints, with the idea being that such treatment of dysfunctional areas in the spine can restore the spine's structural integrity, reduce pain and initiate the body's natural healing processes.

> ***"Slight irregularity in the disposition of the vertebrae by strangling certain spinal nerves at their exit from the spine can have considerable organic effects."*** *- Dr R.F. Allendy, MD in "Orientation Des Idees Medicales"*

> ***"A Chiropractic Adjustment will work on the cervical region. We find in the case of the hypertension a drop from 25 to 30 mm right after the Adjustment is given."*** *– Dr K. Gutzeit, MD, in "The Spine as Causative Factor of Disease".*

Manipulative Therapy Neuroscience

> ***"Manipulative Therapy refers to the application of various techniques to treat movement dysfunctions and alleviate pain. These techniques are selected based on the evaluation of pain and movement signs, and can involve passive movements performed by the clinician, or with active contribution from the patient. Manipulative Therapy targets both the specific region of dysfunction, and other contributing regions, aiming to restore proper movement and function. Care is taken to avoid provoking symptoms or causing harm, especially in cases of acute or severe pain."*** *- in "Whiplash, Headache, and Neck Pain", 2008.*

"Is Spinal Manipulative Therapy Really Necessary?

The Answer Is Undoubtedly, Yes!

The most immediate and important effect of Spinal Mobilisation and Manipulation Therapy is the increase of range of movement at any joint to which the techniques are applied. The effectiveness of various procedures is based on the assumption that flow, or displacement of fluid, nucleus or sequestrum can occur within the intact annulus of the intervertebral disc as a result of prolonged or repetitive loading.

Displacement most commonly, but not exclusively, occurs with flexion loading.

To treat such displacements we must apply well-defined compressive forces, in order to reverse the direction of flow or displacement.

Physiotherapists worldwide are now using Spinal Mobilisation and Manipulation Therapy as the main treatment for mechanical spinal disorders." - in "A Perspective on Manipulative Therapy", Physiotherapy, August 1989.

Efficacy and Effectiveness of Mobilization/Manipulation

"Published peer-reviewed research on the efficacy and effectiveness of mobilization/manipulation interventions provided by physical therapists has repeatedly demonstrated the effectiveness of such interventions for a variety of conditions and regions of the body." - in "Physical Therapists and Direction Of Mobilization/Manipulation", American Physical Therapy Association, September 2013.

Neurophysiological Effects

"An experimental body of evidence exists indicating that Spinal Manipulation impacts primary afferent neurons from the erector spinae), the motor control system and pain processing. Biomechanical changes caused by Spinal Manipulation are thought to have physiological consequences by means of their effects on the inflow of sensory information to the Central Nervous System.Central Sensitisation (defined as an increased responsiveness of nociceptors in the central nervous system to either normal or sub-threshold afferent input) results in hypersensitivity to stimuli, responsiveness to non-noxious stimul and increased pain response evoked by stimuli outside the area of injury. **Spinal Manipulation may effect the Central Sensory Processing by removing sub-threshold mechanical or chemical stimuli from the erector spinae**, so reducing this phenomena. Muscle spindle afferents and Golgi tendon organ afferents are stimulated by Spinal Manipulation. These two components belong to the nervous system and function to influence movement, playing a role in flexibility. **Mechanical and chemical changes in the intervertebral foramen caused by a herniated intervertebral disc can affect the Dorsal Roots, and Dorsal Root Ganglia** (cells in the DRG act as sites of perception of a painful stimulus). Individuals with herniated lumbar discs have shown clinical improvement in response to Spinal Manipulation. **Spinal Manipulation is also thought to affect Reflex Neural outputs to both Muscle and Visceral Organs. Substantial evidence demonstrates that spinal manipulation evokes erector spinae muscle reflexes and alters motoneuron excitability.**

Contra-Indications

Contra-Indications to low Back Pain:

- Any pathology that leads to significant bone weakening.
- Neurological: cord compression, cauda equina compression, nerve root compression with increasing neurological deficit.
- Vascular: aortic aneurysm, bleeding into joints.
- Lack of diagnosis.
- Patient positioning can not be achieved because of pain or resistance." - in "Spinal Manipulation", Physiopedia 2025.

Osteopathy Fully Explained

"Dr Still, the founder of Osteopathy, saw the great necessity for another department in the healing art.

He found in his extensive practice that there were a large class of cases where medicine was useless, and where surgery did not apply.

The result of Dr Still's observations and experimental work demonstrated beyond question that many diseases of the different organs, and parts of the body had their cause in a displaced or contracted part, which resulted in an obstruction to the free and natural flow of the fluids and forces from and to those parts, and also that these displacements and contractions could be found and removed, and with their removal nature would restore to perfect health.

A slight slip of a vertebra, a contracted condition of the ligaments which bound one of the spinal bones to its fellow, caused an impingement upon the nerves and vessels which were given off from the spinal cord, and as a result the energy from the brain was cut off or obstructed, and the organ supplied by that nerve received only a part of its normal amount of energy and nourishment.

Osteopathy may place the entire body in perfect condition (in terms of both muscle and bone skeleton physiological anatomy).

When the cause is not in the organs themselves, but in the physical structure of the body. The nerve centres which control the blood and nerve supply to these parts are located along the spine. And here most of the trouble lies.

Eyes - Osteopathy has accomplished wonderful work in the treatment of the eyes. It has taken glasses off of many hundreds of people.

A strained eye, like a strained arm, has a disturbed circulation which, when corrected, renders the action perfect." - in "Osteopathy Fully Explained", 1903.

Osteopathy Its Place in the Healing World

"Sections of the membership were keenly interested in **Osteopathic Manipulation,** which followed the tenets of Andrew Taylor Still (1828-1917), who believed that **healing came from within the body, and devised a Holistic Therapeutic system based on touch.** In 1920 the members welcomed a lecture on the subject from Dr J. Martin Littlejohn, MD and Osteopath, who after studying with Still had set up a School of Osteopathy in London in 1917.

Dr Littlejohn explained that **"Adjustment" was the underlying principle of Osteopathy, the correction of bony displacements or "lesions" its aim.**

Unlike Massage, Osteopathy was independent of medicine and in the USA and Canada, and of equal status. The British College of Osteopathy was founded in London in 1922, and by 1926 members of the Society, including former St Dunstan's men, had completed Dr Littlejohn's intensive 2-year course, and became Manipulative Specialists. Osteopathic Manipulation was one of a handful of physical treatments on which medical men took sides.

Dr Edgar Cyriax, a great **Manipulator and Vibrator, regarded manipulation as complementary to the Ling System, and to the Nerve-Pressure Treatments** of Ling's successor, H. Kellgren.

Dr James Mennell taught Manipulation Skills to his Massage team at St Thomas's Hospital, and gave the members several lectures on Osteopathy, Manipulation, Stiff Joints, Bonesetting, on the principle that "the twist is the thing".

He Treated Displacements (as the old bonesetters did), By a Reverse Movement to that which Caused the Injury.

Other medical practitioners deplored Osteopathy, and the Council minutes for July 1928 show that the Society's President Sir Thomas Horder refused to address the 9th Members Congress because, Dr George MacDonald, MB, ChB, was to speak on **"Osteopathy: Its Place in the Healing World"**.

Sir Thomas explained that he would not have objected had the audience been a medical one, and capable of constructive criticism. But **he disapproved of lay people being persuaded to add Osteopathy "to their present armamentarium of Physio-Therapeutic Methods"."** - in "In Good Hands: the history of the Chartered Society of Physiotherapy, 1894-1994", 1994.

*"**Therapeutic Touch Promotes Healing.**" - Rui Alexandre Gabirro, Emunctologist*

*"**1. The Body is a Single Whole.***

2. The Structure Controls the Function.

***3. The Body has Mechanisms of Self-Regulation and Self-Healing.**" - Dr A.T. Still, MD, 22 June 1874.*

Osteopathy Is From First To Last An Appeal To Nature: For It Is Nature That Cures

"Drugs and Chemical agents are not as valuable as mechanical, and dietetic measures in accomplishing this in the more chronic maladies.

Osteopathy has been before the public years enough to prove conclusively both its common-sense basis, and its scientific basis, and to demonstrate its practicality by thousands of cures, the majority of these being in chronic cases, which are always the severest tests for any method of healing. It is a Foundation Principle of Osteopathic theory that no Treatment can be successfully applied to a condition of disease, unless it contemplates the Removal of the Primitive Cause; and if this theory is not carried to a successful conclusion, the treatment used can, at most, be only palliative. To Remove The Cause, therefore, Is The Basic Principle of Osteopathic Practice; thus enabling Nature to Operate her Vital Processes Without Resistance, whereby disease is eradicated and health is restored. The Most Important Aim of Therapeutics Should Be: The Removal of the Causes of Disease." - in "The Boston Osteopath", January 1899.

The Value of Massage

"Appropriately Applied Massage Therapy has been shown to have the potential to ease the pain and distress of most Chronically Painful Conditions, including Fibromyalgia Syndrome. Clients with these diagnoses can benefit from an enhanced ability to sleep and relax, better breathing and the effects of therapeutic, and or wellness Massage. When people are unwell and where repair functions have been stretched to their limits, even the gentlest therapy represents an additional demand for adaptation; the therapy is yet another stressor to which the person has to adapt. Therefore, it's important that therapies are carefully selected and modulated to the client's current ability to respond. When symptoms are at their worst, simple interventions are appropriate, with time allowed for the body, and mind to process and handle these changes or interventions. It is worth considering general, whole body approaches. These could include such therapies as Hydrotherapy, Massage, and relaxation methods, rather than specific interventions. These should be offered both in the initial stages and also during periods when symptoms flare up." - in "Treatment Guide: An evidence based guide to Treatment of Fibromyalgia for Massage Therapists", Massage Therapy Journal, Spring 2006.

"The Value of Massage in restoring muscular vitality has been proved experimentally by Zabludowski." *- in "Massage Its Principles and Practice", 1920.*

"The Value of Massage in central nervous affections', muscular atrophy, locomotor-ataxy, paraplegic ataxy, polio-myelitis, pseudo-hypertrophic paralysis; also in occupation cramps of muscle, rheumatic and gouty inflammation of nerves, cervico-brachial neuralgia, lumbago, sciatica, multiple neuritis, alcoholic and diabetic paralysis, chorea, etc. Dr Graham writes: "It is to be regretted that physicians do not oftener try their hands at Massage themselves. They would be fully indemnified for their time and trouble in the improvement of their tactus eruditus which would enable them to appreciate the changes in the tissues brought about by Massage, and this would open a new and interesting field of observation to them. Furthermore, the benefit of their visit would then be immediate in place of mediate"." *- in "The Treatment of Disease by Physical Methods", 1898.*

"Compensatory mobility can be increased by Massage and movements. For warding off the impending stiffness and relieving the pain and swelling that appears in the first stage of periarthritis of the shoulder, I believe the value of Massage can hardly be overestimated, for in doing this it prevents subsequent mischief that cannot easily be overcome. A physician next door to me fell and injured his shoulder-joint. He called on the following day. I found great periarticular swelling, ecchymosis, and pain.

> ***At the end of a week, after daily Massage, the joint was well, and has continued so ever since, now 8 years."*** *- in "A Practical Treatise on Massage", 1884.*

> ***"The Value of Vibratory Massage in the Treatment of Diseases, especially the atropic, of the upper air passages, has been fully attested by many careful observers of recent date. Dr Michael Braun, of Triest, in a paper read before the International Medical Congress at Berlin (Verhandlungen des 10, Internat. Med. Cong., Berlin, 1890), was the first to call attention to the value of Massage in diseases of the naso-pharynx. Dr Carl Laker (Die Heil-Erfolge der inneren SchleimhautMassage, Graz., 1892.) has also written an exhaustive monograph on the same subject, in which he enthusiastically endorses this method of treatment."*** *- in "Electrical Review", 4 September 1895.*

The Value of Manipulation

"There are many who would seem to believe that our only remedial agents are Drugs, because, notwithstanding the decided limitations of Drug Treatment in chronic diseases, they are content to goon employing this method for these diseased conditions year in and year out, and often with the most unsatisfactory results. To those who are unacquainted with the Natural Remedial Resources Lying in the Organism, who know nothing of the Latent Powers of Recuperation by which (when properly developed), Health is Obtained and Continued, the Benefits Resulting from Mechanical Treatment often are Marvellous. The value of this method of treatment is well known in the Germanic countries. Many of our physicians are gradually recognizing its importance, although the practical utilization of it is today in infancy in the United States. It is an undisputed fact that the lack of proper physical exercise is the cause of much debility, disease and suffering. Systematic and uniform physical exercise, stands prominent today as the quickest and most certain curative method of many ills, because it is in compliance with the fundamental law of our physical existence.

It has been stated that:

> ***"Mechanico-Therapeutics embrace the treatment by a properly qualified physician of the sick (chiefly those suffering from chronic diseases), the deformed, the convalescent, the feeble, the aged, and persons needing to counteract the effects of sedentary occupations, by means of active and passive movements, mechanical operations and manipulations executed by the hand directly upon the skin."***

This method depends for its value, and brings about Health and Recovery by the utilization of these principles underlying the results that some from systematically exercising both the voluntary and involuntary muscles.

Presupposing the addition of other proper Dietetic, and Hygiene Treatment, there is by this method a general strengthening and a healthful bodily development. It is a physiological law that exercise strengthens, and that all organic development is that of gradual growth.

This physical strengthening and development can only be accomplished by the systematic exercise of the muscular system, which includes about all the body except the framework, the padding and the nervous mechanism.

Among the more immediate results of the curative exercise is an increase in the strength and rapidity of the heart beats as well as an increase in the frequency and depth of the respirations.

As a consequence there is a more rapid circulation with an Increased Oxygenation of the Blood, Greater Metabolism in the tissues and an increase of watery evaporation from the lungs and skin.

The Liver and Kidneys are acted upon directly by stimulation of the Venous Flow.

In the chest, abdominal and pelvic cavities there is a powerful suction on the returning venous blood due to negative pressure in inspiration, and this is increased in direct proportion to the frequency and depth of respiration.

The Lymph Current Is Also Quickened by the Mechanical Suction.

The Secretions of the Glands are increased throughout the body and the muscles themselves are increased in size and strength; their firmness or density is also enhanced.

Careful Dietetic Treatment is a necessary requisite, as the bodily nourishment must correspond to the exercise.

In carrying out the Mechanical Treatment the exercise is adapted from the beginning to the strength of the patient, and is increased by degrees only in proportion as the strength increases.

If the exercise should exceed the strength, over-exertion results and permanent injuries to heart and lungs as well as the organs of movement may ensue. Cardiac Hypertrophy and Albuminous urine are frequent results of over-exertion.

The sudden loss of vitality also often leads to pulmonary hæmorrhages and phthisis. When the exercise is insufficient the patient derives no benefit and atrophy and weakness still persist.

It is necessary to ascertain for every patient the effort which corresponds to the different group of muscles, and which induces normal fatigue, and to continue to make that effort until the strength has increased and the patient feels that it is too slight, when the work is gradually in creased.

Thus we go on developing those attenuated muscles that were undergoing atrophy from non-use, until the patient soon becomes restored to the normal physical state.

By These Measures We Strive To Cure Chronic Disease By Regulating:

1. **Circulation.**
2. **Digestion.**
3. **Secretion.**
4. **Excretion.**
5. **Bringing All The Bodily Conditions to the Normal Standard.**

In November 1895, in a paper read before the New York Medical Association, I insisted that, this work being academic, and in the following spring, Dr William H. Thomson, made a similar observation, where Mechanical Treatment and Manual Treatment or Massage is given.Manual Treatment is a necessary part of Mechanico-Therapeutics. It should, however, be applied scientifically in a manner to obtain the physiological results desired from each manipulation.

It would be better if the use of the word Massage, was discontinued by the profession because it has become debased. Manual treatment is preferable as it explains itself.

Mechanical and Manual Treatment Properly Given Is Directly Beneficial In Many Chronic Disorders, such as those of the:

1. **Heart.**
2. **Lungs.**
3. **Stomach.**
4. **Intestines.**
5. **Habitual Constipation.**
6. **Hæmorrhoids.**
7. **Pelvic Congestions.**
8. **Weakness of the Limbs.**
9. **Joint Affections.**
10. **Spinal Curvatures.**

Not less important are the indirect benefits obtained by the general strengthening and vitalizing physical exercise.

Dr Gustaf Zandi, says it would not be possible for any of the chronic maladies to develop to a high degree without diminishing the vitality of the body and the general health. This general health that finds expression in the energy with which the living organism resists external injurious influences, or in the perfection wherewith the remaining organs work together to meet those dangers to the whole organism, which are engendered by the accidental overexertion or under-exertion of any one member.

The more perfectly this health can be maintained, the more independent it renders the individual of those manifold internal and external influences, which limit his mental and physical capacity.

It even enables him at times to successfully endure tests to which a less vigorous nature would succumb.

By prolonged or repeated illness this beneficent reaction of nature against disease is diminished, and the regaining of health is rendered proportionately more difficult.

In single cases special treatment may be able to remove the original disorder, but a condition of debility continues, which exposes the patient to a relapse or new affection. In other cases special treatment remains ineffectual, until by generally strengthening treatment the vital energies have increased and the powers of recuperation latent in the organism are again aroused to life.

The generally strengthening effect promotive of all the vital activities, which is possessed in so high a degree by systematic bodily exercise. is therefore of the utmost importance in the treatment of chronic ailments, and during convalescence after acute illness.

But it is not alone through illness that the vitality is undermined.

Senseless habits of life, intemperance, lack of light, air and bodily exercise, especially during one-sided over-exertion of the intellectual powers all this consumes vitality and makes life from childhood to old age a sample book of maladies and infirmities of all sorts.

It is the part of Dietetic Exercise to prevent this misery so far as it rests upon insufficient or one-sided physical exercise.

The great majority of every city population obtain through their wonted occupations a wholly insufficient or most one-sided, and, therefore, often injurious form of bodily exercise; for all these Dietetic Exercises, are an actual and permanent necessity, as everyone must see who is in any way clear as to the importance of the muscles.

Hydrotherapy may also be included in under Mechanical Treatment, as both Cold and Heat in the proper degree act as a stimulant or irritant to the vaso-motor system. They produce a shock followed by a reaction, and thus exercise the muscularis of the blood vessels, and as all exercise, as I have already stated, not too strenuous, is beneficial, a strengthening and a permanent improvement of the nutrition of the body follows.

Cold and Heat are thus cardiac and vascular stimulants, the water being the medium of their application.

Where there is weakness of the cardiac muscle, feeble circulation and weakened muscular power, these can be roused and strengthened and the bodily nutrition generally improved by the use of the bath.

It should be graduated according to the strength of the patient.

In those who are very feeble they should be of exceedingly brief duration so as not to cause exhaustion. It is well always to advise the addition of a handful of Salt to a basin of Water in the sponge bath, and friction with brine towels afterwards to increase the irritant effect.

The Principal Remedial Effects of the employment of Curative Exercise, or Manual Treatment:

1. To Regulate the Circulation: The Circulation of the Blood and Lymph is greatly influenced by the action of the muscles. Muscular action presses the blood through the veins more rapidly; thus its progress towards the heart is greatly accelerated. In cases of muscular inactivity, these scientific movements will often produce the quickest results in restoring an unbalanced circulation to its normal condition.

2. To Increase Secretion and Excretion: Where there is a great diminution of secretion or excretion, systematic curative exercise and manual treatment is of great service. It is especially useful in cases of congestion of the liver, and other viscera, and inactivity of the skin.

3. To Increase Respiratory Power: The breathing power and capacity of the lungs can in no way be so rapidly and powerfully developed as by mechanical and manual treatment. We have known persons to thus treble their breathing power in a few weeks. A case of Chlorosis (loss of the normal colouration) girl of 17, who all her life had been delicate. She had been given Blaud's pills for 2 years without improvement. Her breathing power, lung capacity at the beginning of the treatment was 50 cubic inches, at the end of 4 weeks it was 130 cubic inches, and in 8 weeks it was 160 cubic inches. Thousands have been saved from a consumptive's grave by means of curative exercise. The lungs with their bronchi and blood vessels, are mostly muscle, and functionate like the digestive organs, only through muscular activity.

4. To Increase Digestive Power: In many chronic diseases of other organs as well as in functional derangement of the stomach, deficient muscular and digestive power of the stomach and intestinal canal may be greatly benefited and in many cases completely cured by means of this treatment.

5. To Increase Assimilation: There is no means by which assimilation may be so powerfully stimulated and encouraged as by the careful employment of mechanical and manual treatment.

6. To Increase Vital Action: This method of treatment is of great service in cases of debility, and general weakness and in all diseases where there is inactivity of the vital functions.

7. To Regulate Muscular Action: No remedy is of Greater Value in Treatment of Disordered Muscular Activity, as in various distortions of the spine, resulting from unequal muscular action; also in many cases of uterine displacement. In cases of paralysis no other remedy, unless it be Electricity, will accomplish so much as systematic, skilful, Mechanical and Manual Treatment.

Dr Jacob Texhner, in Observations on Treating Deformities by physical development, calls attention to certain facts:

"1. It is rapid, improvement being noticed by the patients, their relatives, and myself within 7 or 10 days after treatment has begun.

2. The improvement in general health and the increase of weight.

3. The wholesome effect upon the nervous system by the cultivation of muscular precision and endurance.

4. The marked increase in the lung capacity.

5. The beneficial effect upon the heart's action, as shown by the diminished frequency of the pulse and the increase of pulse pressure after each treatment, as shown by Basch's sphygmometer.

6. That all patients continue to improve generally and muscularly long after active treatment has ceased"." - Dr T. J. MacGillicuddy, MD, in "Some Remarks on Mechanico-Therapeutics", The Canadian Journal of Medicine and Surgery, May 1898.

Deceptive Propaganda

"We hear much talk of Deceptive Propaganda, about what the Medical Trade has done to improve man's health and increase his life-span.

That sums up the Empty Result of 3,000 years of Medical Work.

What profit has it brought man?

It has Cost Civilization Billions upon Billions of Dollars.

When I was a boy, and saw children sicken and die under the doctor's care, I lost faith in Medicine, and began an investigation that I have pursued all my life, and made some shocking discoveries.

I realized Medical Trade Doctors are not interested in Nature Methods, for these make them unnecessary and Damage their Business.

So they oppose and condemn them in self-defense.

I began by putting the Law of Cause and Effect into action, and searched for Cause.

The Body Repairs Itself; The Principal Agencies Used Are:

1. Pure Air.
2. Good Water.
3. Sunshine.
4. Exercise.
5. Natural food.

That is the reason why doctors, drugs, serums and operations always fail.

For years I tested this Health Philosophy in active practice, and lost not one patient. Practically every one of them was a physical wreck, and came to him only as a last resort, after being cast off by other doctors as hopeless and incurable.

His method is too natural and simple:

1. Air: The Breath of Life is first: "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul." - Genesis 2:7. When you stop breathing you stop living. To preserve life the Air must be free of pollutants. So he put his patients where they had only fresh, clean air to breathe.

2. Water: The Fluid of Life comes next. Man cannot live long without water. The greater part of the blood and body consist of Water. To preserve life the water one drinks must be pure, and free of the pollutants used by political health boards. So he gave his patients only pure rain water to drink.

The Medical Trade Doctors, can live and thrive on human misery, as long as the multitude can be kept in ignorance.

People Suffer from Autointoxication, Toxaemia, Enervation, and in time these develop and grow, from the same cause, into more serious conditions, which Medical Trade Doctors term "diseases", and try to cure with their poisons." - George R. Clements, in "Live Better", 1962.

> ***"He who truly desires to be informed of the question in hand must be held bound either to look for himself, or to take on trust the conclusions to which they who have."*** *- Dr William Harvey, MD in his second Dissertation to John Riolan*

Therapeutic Effects of Acupuncture

Acupuncture is specially indicated, and is specially of great usefulness application, in the treatment for all types of joint, muscle and tendon pains, whether it's due to bursitis (inflammation and swelling of a bursa), Tendonitis (inflammation of the tendons between your muscles and bones), Fasciitis or any Functional causation in origin of the inflammation, or irritation of a muscle, these types are faster resolved by the correct use of Acupuncture.

If the inflammation in the muscles, or tendons have their origin in an organic causation (Toxaemia), this type of inflammation is best treated by Hydropathy, and Osteopathy combined.

Acupuncture is useful in resolving muscular pain conditions: Neck, Jaw (temporomandibular joint), Shoulder, Tennis elbow (specially useful), Wrist, Hand, Finger (thumb), Hip, Knee, Ankle, Foot (plantar), Fasciitis (inflammation of the fascia), Toe and repetitive strain injuries.

How Acupuncture Acts

Acupuncture Acts; by causing a therapeutic inflammation on the point of insertion of the Acupuncture Needles into the muscular tissue, thus, by its effect it causes an increased in the circulation of blood and lymph, and helps to decrease tone in muscle tension, and desensitize the treatment area.

Immediately following Acupuncture Treatment, one may experience some discomfort, or even a local minute mild pain. This is the natural body tissue response to the local insertion of the Acupuncture Therapeutic Needle. The following day, a general improvement of the condition is usually felt.

Advice on Frequency of Acupuncture Treatments

The Following Rule Is Advised:

An individual can have maximum 3 Acupuncture Treatments for any specific condition, where Acupuncture is indicated as of therapeutic benefit.

1. The First Treatment: If the condition is not improved after the 1st treatment, a 2nd treatment can be done only 9 Days after the 1st treatment.

2. A Second Treatment: If the condition is still present, after the 2nd treatment, a 3rd treatment can be done only 12 Days after the 2nd treatment.

3. The Third Treatment: If the condition has not resolved by the 3rd Acupuncture Treatment (this should be the Last Acupuncture Treatment for the same local condition), then, Other Therapeutic Modalities can and should be used, and pursued, in the treatment of any unresolved conditions.

By either:

1. **Hydropathy.**
2. **Electrotherapy.**
3. **Massage, given in a Neuropathic manner.**
4. **Osteopathic Manipulation.**
5. **Chiropractic Adjustments.**

These Therapeutic Specialities, can also be used along side the first, second and third Acupuncture Treatments, ideally not given nor taken on the same day.

Some Relevant Mechanism on the Action of Acupuncture Upon the Body

Acupuncture causes release of many chemicals many Neurotransmitters endogenous chemicals that enable neurotransmission, chemical messenger that transmits signals across a chemical synapse, such as a neuromuscular junction, from one neuron (nerve cell) to another "target" neuron, muscle cell, or gland cell.

The 2 main types of Neurotransmitters, that Acupuncture influences its release:

1. Endorphins (endogenous opioid neuropeptides, a morphine-like substance originating from within the body), these are hormones secreted within the brain and nervous system and having a number of physiological functions. The principal function of Endorphins is to inhibit the communication of pain signals.

2. Dynorphins (opioid peptides), known to be a modulator of pain. Thus Acupuncture by inducing the production, within the body of Endorphins and Dynorphins becomes an effective painkiller, this is one of the many reasons that makes Acupuncture a valuable Therapeutic Method.

Cortisol

Cortisol is a steroid hormone. It is produced in humans by the zona fasciculata of the adrenal cortex within the adrenal gland. Cortisol is able to stimulate the formation of glucose (gluconeogenesis), and activates antistress and anti-inflammatory pathways, aiding in the resolution of inflammation.

> *"Serum cortisol levels were determined in 40 normal Chinese and dopamine beta-hydroxylase activities were measured in 22 normal subjects before and after acupuncture treatment.* ***Serum cortisol levels increased significantly after needling on the Traditional Acupuncture Loci*** *(specific points, anatomically identifiable, sites on the body's surface where needles are inserted to stimulate nerve endings, neurovascular bundles, or muscle motor points, often associated with sensations).* ***After Acupuncture for 15 and 45 min., the Cortisol Increase was 28% and 50%,*** *respectively, as compared to the self-control studies.* ***The Beneficial Effect of Acupuncture in the Treatment of Functional Disorders, therefore, may be mediated by cortisol or other hormones and neurohormones."*** *- in "Effects of Acupuncture on serum cortisol level and dopamine beta-hydroxylase activity in normal Chinese", Am. J. Chin. Med., 1982.*

Acupuncture Anesthesia: Percutaneous insertion of, and stimulation by, needles placed in critical areas of the body to produce loss of sensation in another area.

The Treatment of Neuralgia by Acupuncture

> *"Dr Sutherland in "La Semaine Medicale, No.50, 1900",* ***Reports the Immediate Relief of Severe Neuralgic Pains, and particularly that type of pain called lumbago, by a simple and almost painless procedure. He pinches up a fold of the skin directly overlying the point of suffering, and pierces it through and through with a needle, which is allowed to remain in place for from 3 to 20 minutes. The relief experienced, due no doubt to an irritation of the nervous terminals and a modification of the circulation, lasts for about 10 hours."*** *- in "The Therapeutic Gazette", 1901.*

Contra-Indication on Cortisol Injections:
In regard to cortisol injections given by the **Medical Trade.**

Before Acupuncture Treatments may be administered, the person Must Wait 4 Weeks After such injection, Before Acupuncture Treatment can be applied.

Areas of Application:
In Emunctology Acupuncture should Only be applied to the following anatomical areas of the body:

1. **Neck.**
2. **Shoulders.**
3. **Upper limbs (arms, hands).**
4. **Hips (gluteal region).**
5. **Lower limbs (legs, feet).**

Areas of Non Application:
The Emunctologist Practitioner should not perform acupuncture, nor recommend acupuncture in any Abdominal, Visceral, Lumbar or head area of the body. In any of these areas, if pain, irritation or inflammation exist, diet must be modified and the organs neuropathic connected to the inflammation area must be Therapeutic treated by Hydropathy, Osteopathy, and Chiropractic methods when indicated. Thus pain caused by inflammation which has its origin from organic metabolism, must be treated to the source and not towards its symptoms. To do so is to manage pain, and not treating the area generating inflammation. In this regards, diet must be rectified and Hydropathic Treatment must be employed. Only Healthy Food along, with Hydropathy can resolve chronic pain originating from organic cause.

Abdominal and Lumbar Areas: Pain, irritation or inflammation in these areas, should always be suspected, as of the origin in their causation being from the inner organs (if organic), and of the skeleton (if functional).

To apply Acupuncture for the treatment of pain, irritation or inflammation in these areas, it would be to treat the symptoms, rather the source or real cause of such discomfort.

Important Note to be Present and Always Remember

If the treatment by Acupuncture for any reason fails, then:

1. Hydropathy
2. Osteopathy
3. Chiropractic
4. Red Light

Treatments should be recurred to.

The Hydropathic Treatments, properly given will rectify and solve the problem, from any type of Joint, Muscle and Tendon pains, whether it's due to Bursitis, Tendinitis or Fasciitis, bearing in mind that it will take several treatments, this may require in some cases long, tedious activity and patience.

But remember, God's plan is slow, but sure, and He will not suffer those to be tempted beyond that they are able to bear.

Acupuncture is Excellent for:

1. Tennis Elbow:
It can be used alongside Red Light Treatments.

2. Golfers Elbow:
It can be used alongside Red Light Treatments.

3. Frozen Shoulder: It can be used alongside Red Light Treatments.

Hydropathy Packs can, and should be used to resolve any unresolved issues, Osteopathic Manipulation, and Chiropractic Adjustments are also of immense value in restoring the proper function of the body.

WARNING: Not not use Ultrasound, please see

Chapter 40

An Eye Surgeon Clinical Observations

"Dr Bigelsen, MD, Eye Surgeon, taught us not only great integrative medical practices from around the world, especially Germany, but also the political implications of pursuing Innovative and Traditional Therapies, including Homeopathy and Isopathy. *Graduated from the State University of New York at Buffalo School of Medicine in 1965. He began his Ophthalmology residency there, and soon after was drafted in the army and deployed to Vietnam, where he was charged with triage of mass casualties. The horror of his experience left an indelible mark on his psyche and political perspective. After Vietnam he completed his Ophthalmology residency and started a practice in Princeton, New Jersey." - in "Townsend Letter", June 2019.*

The Healing Process

"The Body Naturally Heals Itself by; creating inflammation that surrounds an insult and isolates it from healthy tissue.

This is the most basic, most essential healing effort by the human being.

If you have a small cut, the swelling and redness followed by a scab is the inflammation that the body creates to heal that cut.

The greater the injury, the greater the inflammation, and the more noticeable and far-reaching its effects; even with a major injury and similarly massive inflammation, if you allow the healing process to follow its normal, natural course, the inflammation is not a problem.

Surgery

All Surgery Is An Assault on The Body.

It is the most common cause of major, long-term inflammation in the body.

Long-Term Inflammation occurs when a physical barrier is present that keeps the healing process from resolving itself normally.

The barrier traps the inflammation, shielding it so that the body can neither bring it healing tools nor move its wastes out through the normal channels of blood and Lymph Circulation.

Scar tissue is like a brick wall trapping the inflammation.

No nutrients get through to it, and its waste just circulates around and around, depleting your energy, and causing you to feel 20 years older after surgery.

Chronic inflammation is the term the Medical Trade uses for this phenomenon.

The longer inflammation stays in the body, the sicker you become.

Trapped Inflammation Causes Chronic Disease.

The longer the vasomotor flow is blocked, anywhere, and in any way, the more likely that it will have a negative effect on the health of the body.

Medical Trade Schools teach their students, that the "Body has no intelligence of its own", that "it is a machine to support the function of the brain."

Organs are replaceable, and some organs, are not even needed.

Medical Trade Students, are taught that the Human Body: "Is Exempt from the Laws of Nature."

The Governmental Institutional Pharmaceutical Infrastructure

The Governmental Institutional Pharmaceutical Infrastructure; that rules the world, was put in place during the AIDS scare of 1980's, and 1990's

The American Biochemist David William Rasnick, has estimated that **$570 Billion Dollars, have been donated to the Medical Trade, to be spent on AIDS Research, since 1982, to find a "Cure", with Zero Results.**

Entertainment Celebrities like Jerry Lewis, and the Foundations they represent, (Labor Day Telethons, U.S. Television Campaigns to Raise Money for "Medical Research", have Raised **$2.45 Billions of Dollars over the years "for a cure", with Zero Results).**

The National Cancer Institute, has received $160 Billion in Funding since 1971.

> ***"The "War on Cancer" was launched in 1971 by President Richard Nixon to find a cure for cancer by increased research.*** *The goals were to improve the understanding of cancer biology and to develop more effective cancer treatments. The aim of such efforts is to eradicate cancer as a major cause of death.* ***Cancer in general remains a major cause of death half a century after this war on cancer began****, leading to a perceived* ***Lack of Progress****, and to new legislation aimed at augmenting the original National Cancer Act of 1971." - in "War on cancer", Wikipedia, 21 November 2025.*

Licensed Medical Trade Doctors, are not allowed to use the word "cure" when talking about Chronic Disease, because **Not a Single Cure has been found in nearly 100 years.** Indeed, **any doctor claiming to offer a treatment, that cures any disease, will lose his or her license.**

The Arizona Medical Board, once charged Dr Harvey Bigelsen, MD, for "curing a person by illegal means."

The head of the board told him, that they did not care if my patients were getting better or worse; they only wanted him to do the work "in our way, scientifically."

Then, there is Henry, in 2005 his Appendix ruptured and he had emergency surgery to remove it. A few years after that, the adhesions (surgical scars) created a bowel obstruction, and his pancreas swelled up (more surgery).

Around 6 months after that, Henry was diagnosed with multiple myeloma, a kind of leukemia. In essence, his bones were rotting. This is a chain of events; it is not a list of 3 separate and unrelated illnesses. However, this is simply the context for Henry's story. Weakening, in stage 4 of his myeloma, Henry is admitted to the ICU (intensive care). His blood count is low, and two doctors are arguing over whether he should be given chemotherapy or radiation. Henry also has diarrhea, so they call in a colon specialist, who declares that he needs to perform emergency surgery to remove Henry's entire intestine. Henry is dying but his intestine should be removed.

> ***"From the perspective of terrain; diarrhea is an elimination process of the body. That means its purpose is to get rid of something. Just what is it that the body is trying to eliminate? Whatever has irritated our intestines. The irritation may be something we ate; it causes the body to adapt, and the bacteria that inhabit our gut go to work, moving out the irritant and healing the tissues. Remember that the waste of this process needs to be expelled as well. The bacteria in the gut are designed to maintain a positive environment. They will take on the janitor role to clean up a situation in which the tissues are irritated."*** *- Dr Harvey Bigelsen, MD, in "Doctors Are More Harmful Than Germs", 2011.*

Function & Structure

Function Creates our Structure. A disease cannot occur spontaneously; there are no accidents in nature. Very few people, realize the significance of the mouth's relationship to the rest of the body. The mouth structure is crucial. Swallowing presses the tongue to the roof of the mouth so that the cerebrospinal fluid is pulled into the skull and around the brain. The jawbone moves between 1,800 and 2,400 times a day in the act of swallowing.

Just moving the cerebrospinal fluid around the nervous system requires a complex, coordinated set of movements. If any one of the structural parts that takes part in this dance is damaged, the rhythm of the flow is distorted.

And when the rhythm of the flow is distorted, we can get sick. The mouth is the mirror to the body and can reveal signs of underlying health issues.

Emotions

Emotions are at the root of all perception, and they cause the brain to release chemicals as sensory information is received.

The chemicals send electrical impulses to our nerves, which then cause muscles to move or to tense up.

Whether we express them or hold emotions inside, we contract or clench or freeze a particular area of our body.

We have to release the emotional energy, or we will create a permanent tightness.

The garden of life is within. Your health is in your hands. Illness or disease requires stagnation from a blocked flow. Inflammation is never isolated to a single location because our circulation moves around our entire body.

Everything is connected. Healing begins with structure.

Our bodies were made to move. Moving contributes to a healthy soil (terrain) in which the cells receive vital Nutrients and Oxygen.

Direct Effects of Medication Not Side Effects

We are told that Pharmaceutical drugs have "Side Effects." They are "Direct Effects." They Happen as a Result of Taking a Drug. If you put a foreign chemical in your mouth and swallow it, that drug will have multiple Direct Effects; Not Side Effects. "Rare or Unusual" Side Effects Including Death!

A Foreign Chemical is one that does not occur naturally in the body; therefore, it has negative effects. We are told, perfectly healthy people with no known risk of heart disease should be taking statins! The Pharmaceutical Companies would probably also prefer that we pay no attention to the medical and scientific journals publishing research suggesting that The Incidence of Cancer Is Much Higher In People Who Are Taking These Drugs ("I don't think we know all the harms yet." - Dr James M. Wright, professor of pharmacology at the University of British Columbia in Vancouver; Another potentially serious side effect - first recognized just a few years ago - is an increase in the risk of diabetes; "Do Statins Cause Diabetes & Heart Disease?" - Mark Hyman, MD).

England wanted to sell statins over the counter, and in the U.S. medical doctors recommend that children take them. Why? To counter "The Obesity Epidemic."

The Medical School

In the US., Medical School teaching works like this: In the 1st year, we learn the "normals" of the physical body. Essentially this amounts to how the body functions, part by part, and system by system. There is some mention that one of these may affect one another, but for the most part they are taught separately.

The respiratory system, digestive system, circulatory system, nervous system, muscles and bones; All separate parts and functions. In the 2nd year of Medical School, we learn about the diseases, that "attack" each of these systems and parts, and what they do to the functions. Each disease is treated separately, and each system is looked at in terms of how each disease affects it alone. In other words, kidney failure is discussed without reference to the respiratory system. One of the things I never could understand, was how these 2 years of learning connected to each other. My questions were never answered; how we go from healthy, normal function to disease was never discussed. According to medical school, one day you are healthy and the next day you mysteriously get ill with some strange disease." - Dr Harvey Bigelsen, MD, in "Doctors Are More Harmful Than Germs", 2011.

“During the Vietnam War, Dr Harvey Bigelsen, MD was a Trauma Surgeon, and started questioning a lot, about his Medical Schooling, when he got drafted to Vietnam. He was one of the co-authored of the law that created the American Holistic Medical Association.

And Arizona was the first state that had a law that separated the American Medical Association, from the American Holistic Medical Association, and Removing power from the AMA.

He was taught in Medical School that the human body was exempt from the laws of nature. And they never taught him how a normal body became an abnormal body and even more important; how an abnormal body became a normal body. So, as he started to shift things, with a holistic approach, he started getting results. For example, Dentists don't understand how much the mouth and teeth affect the rest of the body.

He was seeing in the blood, how the clients got better.

You can tell people all day long: “The blood looks better”, but if you don't feel any better, it doesn't mean anything.

When he started to incorporate Osteopathy, into his practice, everything started to change. The Medical Trade has been lying for over a 100 years.

The Medical Trade claim they “have never found the cause, or cure of a chronic disease”, in over 100 years. Thus they are not experts!

Homotoxicology

Homotoxicology: A toxin enters the human (Homo-Toxo), Toxicology.

As a toxin enters the human, the body wants to excrete it, to Eliminate the toxin.

Homotoxicology is explained in 6 Phases

1. **Phase 1, This is Elimination: Excretion is; sweating, coughing, sneezing, diarrhea, vomiting. If the body cannot get rid of the toxin through excretion, then Phase 2 is inflammation. Bacteria comes into the picture to help push things out to facilitate elimination.**
2. **Phase 2, Is inflammation: Fever is a manifestation of inflammation, and when you sweat, you are eliminating. Sweating is elimination. The body is brilliant, it does amazing things. If toxicity cannot get out of the body through inflammation, the system becomes inflamed, and things back up. If toxins can't get out, they will be deposit in the usual places in the body.**
3. **Phase 3 is Deposition: Excretion, normal, inflammation, bacterial, deposition is fungal. Now, we're molding. And things will deposit in the usual places.**

If the body is out of alignment, putting pressure on organs, then things will accumulate there. If you have Emotional Issues that can be align with Bach Flower Remedies.

The Lungs with Grief, and The Liver with Anger. So things deposit where there is restriction. We can see Inflammation as people take Pharmaceuticals, they only suppress symptoms, they don't resolve. Then the 3 Phase Deposition, toxins deposit.

4. Phase 4 is Impregnation: Toxins impregnate into the tissue. When you pass this biological division, it enters the chronic stage. Phase 3 and 4 you don't notice so much, because you push toxins deeper, but things are festering.

5. Phase 5 is Degeneration.

6. Phase 6 is Dedifferentiation. Stage 5 and 6 are the Chronic Stages. Phase 6 are All the Cancers.

What is happing in the United States, Canada, Europe, Australia and New Zealand?

1 in 3 people is going to get cancer, the average American's on 3 to 5 Pharmaceuticals. Americans are suppressing symptoms with pharmaceuticals, they are not resolving the issue, they are suppressing the issue. Pushing toxicity deeper into the system.

So the body has to figure out how to deal with it, if it can't get things out, it ends up in cancer.

> *"Cancer is a mold, low oxygen, and a certain pH. It's a natural process that happens when you're in the ground." - Dr Harvey Bigelsen, MD*

So, Homotoxicology, is very simple to explain the progress of Dis-Ease.

If excretions are happening, aid them.

Inflammation, how many people are taking Pharmaceutical Anti-Inflammatories?

If someone is inflamed for a long time, they have a block.

This can be seen in the blood, with the microscope. We can see blocks, remove blocks, and then you can reverse that whole process in the progression of disease. Thus, basically everything the Medical Trade does, is Suppressing Symptoms, the Medical Trade push the sickness deeper down into the body, with Pharmaceuticals. For example: When pain goes "away", "the drug is a success", but it's pushing the inflammation deeper into the body.

In Phases 3 and 4, Deposition and Impregnation, this is what Antibiotics do.

People feel better? No! They just don't feel those symptoms anymore, but there's an underlying festering that is still going on. If you are healthy to begin with, the body is going to figure out, a way to eliminate the toxins.

That's what the body system does. Because, with any type of poison, the body is designed to excrete, and eliminate it. The Human Body is a Beautiful System.

All You Need is to Support It. If we keep suppressing the process, it just pushes the sickness deeper and deeper, down into the body, then you start having Chronic Diseases.

Homotoxicology explains how things go from the bacterial, to a fungal stage.

Molds (fungi) decompose human bodies, as part of the Necrobiome, especially during the later stages of decomposition. After death, internal microbes, including fungi from the gut, begin to break down tissues, and external fungi then colonize the body's surface as it decomposes. And there are different molds that decompose, including Aspergillus, Penicillium, and Mucor. And the beauty about it, is that the Microbiome in the living body, can all be reversed. You don't get to Phase 6, like you have been struck with lightning.

You go from Phase 1, through Phase 5, first before you get to Phase 6. When things start to deposit into the body system, and if the person is full of grief, it will probably, goes to affect their respiratory system. In certain cases, one can actually pinpoint the emotional component behind it, by trying to figure out which system it's affecting right now. So, it really it really basically it explains Pleomorphism really well.

Homotoxicology

"Toxicology is the study of the adverse effects of chemicals on the body. Homotoxicology is essentially where toxic substances are seen to disrupt normal biological function which results in the manifestation of symptoms and signs, and ultimately disease. The influence of toxic substances, and the removal of these toxins to regain natural regulation. Organic human disease is the result of toxins which originate either from overproduction within the body, or from the environment in which we are exposed. Homotoxicology was developed by Dr Hans Reckeweg, MD, a German Physician.

Definition of Organic Disease

Organic illness is defined as an overload of the environment in which tissues and cells live and communicate (connective tissue matrix) with toxic substances (homotoxins). Each disease process runs through 6 specific phases and is the expression of the body's attempt to cope with these toxins. Diseases are thus viewed as biologically useful defence mechanisms, and symptoms are seen as the expression of the body attempting to self-regulate and heal itself. Health, is the expression of the absence of toxins, when the body is able to function at its optimum. Diseases are the expression of biologically purposeful defence mechanisms against endogenous and exogenous homotoxins, or the expression of the organism's effort to compensate for toxic damage it has sustained. Common examples of these homotoxins include any toxic chemical, bacterial toxins (as seen in food poisoning), cellular debris after trauma, lactic acid after strenuous exercise (partly responsible for stiffness of muscles), and other by-products of normal metabolism (e.g. carbon dioxide; urea and nitrogen based waste products; free radicals). Other examples are tobacco exposure, Medical Trade Drugs so-called "Medicines", and Vaccines, pesticides and heavy metals.

Evolution of Organic Disease

> ***The bodies are designed to tolerate and cope with these toxins. We are constantly regulating our internal environment to maintain optimal function and health (known as the biological process of Homeostasis). When we are overloaded with toxins, or unable to regulate this process of toxin removal from tissues, there is a build up in the system. Over time, toxins accumulate and damage various organ, metabolic, immune and other systems and pathways. This may be localised to a particular organ or tissue, or be more generalised. In the chronic setting, our bodies respond by attempting to eliminate these toxins – we create discharges (e.g. diarrhoea or runny nose), or inflammations (e.g. allergies, skin rashes, fevers). Symptoms produced depend on the individual person and the toxins involved, so are highly variable. If this response is able to remove the imbalances and restore function, then health is returned. If this response is inadequate, or suppressed through symptomatic Medical Trade so-called "Treatment", toxins may continue to be deposited and start to interfere with cellular function. This is when we may start to see the development of more chronic disease processes and increased rates of degeneration. This concept is well documented in the 6 Phase table of disease evolution. This model is very useful in the understanding of disease processes in light of the therapeutic principles on which Homotoxicology is based."*** *- in "What is Homotoxicology?", 6 February 2018.*

So, if Medical Trade Doctors don't understand Homotoxicology they don't understand how the body works, and Dr Bigelsen, MD wasn't taught that in Medical School, Homotoxicology simplifies, and it explains the progression of dis-ease.

What Pleomorphism Is

The whole experience is not the Germ It's the Terrain.

Dr Antoine Béchamp, MD, Physician, Chemist, and Pharmacist; became the first dean of the Lille Faculty of Medicine in 1876.

Dr Béchamp, MD proposed that tiny organisms he termed Microzymas, and Not Cells, are the fundamental building block of life. That these Microzymas are present in all things, animal, vegetable, and mineral, whether living or dead. Microzymas coalesce to form blood clots and bacteria.

Depending Upon the Condition of the Host, Microzymas Can Assume Various Forms, Sizes and Shapes. In a diseased body, these Microzymas can become pathological bacteria. In a healthy body, these Microzymas form healthy cells. When a plant or animal becomes inanimate, the Microzymas continue to live on. Microzymas, are the most basic form of life. They help us to create who we are. They help us to decompose. There have been called different names throughout the centuries.

Plato talked about them; Micros, Endobions, Somatids, Proids, Bions.

These will morph and change into bacteria and fungal.

They will morph and change through the process of Pleomorphism, based on the terrain. And they'll morph into the bacteria to help us, in that bacterial stage, they'll morph into the fungal to help us.

So, the beautiful thing about Pleomorphism is though, if we can support the terrain, in the environment, then it's reversible. It goes both ways.

If a person has a fungal experience; we support the body, remove blocks, oxygen gets into the system, Attitude Changes with pH, and things revert back from fungal to bacterial, to normal healthy microzymas through that Pleomorphism process.

So, Microzymas changes shape and form depending on the environment.

The body system is always changing, and adapting based on the environment.

The body internal environment, is just the same as what's going on, in the body external environment. Everything Is Connected. The way we look at life, all these diseases make perfect sense; there's no mysteries here.

The mystery is the individual, of how they did all this, there are 3 Factors:

1. Physically (accidents, lead to injury causing trauma).
2. Organically (wrong foods leads to autointoxication, or toxic poisons, leads to Toxaemia).
3. Energetic Imbalances (from either emotionally and spiritually, ideas, ideals and attitudes). Remember that life, both physical and spiritual: Life Is Energy!

These are the 3 Major Factors, that either individually or combined, can bring dis-ease to any individual.

There is always a reason if an organ isn't working properly. You need to have a flow, no obstacles to either the Lymphatic of the Blood Circulation, or the Air Circulation. Even the physical flow of energy, or the spiritual life force energy.

All blocks need to be resolved. For example surgical scars cause massive block in the body.

The amount of layers surgeons go through in the operation table, 5 to 7 layers of tissue they normally have to cut through, just to perform one basic surgery.

Also, scars, adhesions, for the Medical Trade everything requires a Laparoscopy (a minimally invasive surgical procedure that allows surgeons to access internal organs through small incisions), which they think is minimally invasive, but as soon as they put that gas in there, they wipe off your slime layer (an unorganized layer of extracellular material which surrounds the bacterial cell, usually composed of polysaccharides and it may serve to; trap nutrients, aid in cell motility, bind cells together, or to adhere to smooth surfaces).

Thus you get a giant adhesion internally.

Remember

Scars (external or internal) Are A Big Deal; they disturb the energetic flow, and scars can also affect the individual emotionally.

There is always emotion behind a surgery, and the injury which caused it.

If you remove the blocks, the body does what it needs to do, all we have to do is support it. Remove the blocks, let the body heal itself.

And in individuals in Chronic Conditions, what we see in the blood, we see physical blocks, we see energetic blocks, we see emotional blocks.

There is law and order in the way and manner in which nature works.

So, first of all, if you've got toxins, heavy metals, or a fungal infections, if the river flows, then all is well.

Even teeth can cause energetic disturbances, and structural issues.

First, thing to do, is to open the pathways of elimination.

Thus the need to align the body, by Osteopathic Manipulations, Chiropractic Adjustments, to release the blockages, and to take pressure off the system. And align the body.

The Digestive Issues: How many times we've seen Body Misalignment Issues, connected with Digestion, Scars and Adhesions. Adhesion are pulling internally, a strain pattern, this is how the Fascia Reacts, pulling internally, putting pressure on the system. If the body system is inefficient anywhere, it's going to affect everything, because all parts are connected.

Both Emotional, and Physical Issues cause physical tension, affecting the circulation to the organs, and energy to different sites of the body.

Humans need to Appreciate their Uniqueness, in the midst of the Natural Experience.

The Idea of releasing strain, taking pressure off the system, and aligning the body is the Ideal, and the Key. A Good Clinician, either Osteopath or Chiropractic, should never put you through pain. Pain should never be part of the process.

"Miracles happen, only when you know what you're doing." - Dr Harvey Bigelsen, MD

If you're going to a Medical Trade Doctor, who's guaranteeing you no cure, you're probably not going to get cured because that's their truth.

Remember: There is no difference between the Microbiology in the Soil, and the Microbiology in the Body. It's doing exact the same thing.

We never hear a farmer say: "The crops didn't come in last year, because we had worms." It's the exact opposite, they're trying to get worms into into the soil. Microbes, they do so many important things. They're one of the greatest creations. When we start to have a block in the system, the bacteria come and they clean up the garbage and the and the bacteria is waste product as nutrients for your body. The farmers know this. What's missing, is the microbiology to process the nutrients for the soil, because the nutrients are bound in the soil.

The same thing goes on in our body. If we don't have the bacteria, we cannot process nutrients. They're just bound there. If there's a block in the system, the bacteria over proliferate. So, it is important what's going on with people's Microbiome.

> ***"Farmers and doctors got it wrong when they thought they can improve on how nature evolves. We have an epidemic of surgeons, too many surgeries creating too much inflammation in the system." - Dr Harvey Bigelsen, MD***

People have trapped issues, because surgery doesn't release inflammation, it creates inflammation, the scars. When seasons change, there's adaptation. People can make a choice of living in a world where they're afraid of everything, "being attacked by germs", or they can live in a world where, each individual creates his own health, from inside out, and the more they feed their own vibrations, the more impervious there are to outside influences.

> ***"Fear should never be part of your truth." - Dr Harvey Bigelsen, MD***

So, when Masaru Emoto, found out about Dr Harvey Bigelsen work, he was thrilled, because One Can See the Emotions In The Blood. Every Organ Vibrates at its Own Frequency. All Matter Have Different Frequencies. This is science. In the Body there's this Beautiful Symphony. If something is out of balance, Dysbiosis, then it changes the frequency and it's like a dissonance in music. Now we can visually that. We call it a disturbance field. Capillaries are small, so only one red cell can fit through at a time. We see images that are much bigger than that. Physically, if these images were in your bloodstream, you could potentially have a stroke. A Laboratory Test Is Never Going To show You The Cause of Anything; It shows you the Result, but **It's Never Going To Show You The Cause!** The Microzymes Never Die, they help us to create who we are, and they help to decompose. So, they're within us. In the end, one of the most important things Dr Bigelsen used to say to his patients was: "For your health have joy. Get your 10 Minutes of Joy, Every Day." And, he would write it on the prescription pad:

> ***"It's good for your health. It changes pH."***

There's your terrain." - in "An Eye Surgeon Clinical Observations", 18 November 2025.

> ***"If you wish to be of enduring service, not only to those now living, but to posterity as well, you can do so if you will take the time to organise all of the causes of failure as well as all of the causes of success."*** *- Andrew Carnegie, in "Conversation", with Napoleon Hill in 1908.*

Medical Trade Doctors Recommend Treatments That They Would Not Use Themselves

> *"Doctors recommend treatments to their patients that they would not use themselves, a US study suggests ("Physicians recommend different treatments for patients than they would choose for themselves", Arch. Intern. Med., 11 April 2011)." - in "Doctors 'often defy' their own treatment advice", BBC News, 12 April 2011.*

The Medical Trade Doctors Drop Dead Just As Their Patients Do

"Diagnosis: That part of medicine whose object is the discrimination of disease, and the knowledge of the pathognomonic signs of each. It is one of the most important branches of general pathology. (Medical Dictionary)

Symptoms: Any change, perceptible to the senses, in any organ or function, which is connected with morbific influences.

It is by the aggregate and succession of symptoms that a disease is detected. (Medical Dictionary) In simple language, diagnosis is nothing more nor less than the searching out, studying and naming the symptoms of Impaired Health, erroneously calling them "diseases", and treating them as dangerous entities per se. That deceptive, illusory, confusing system is boastingly termed "Medical Science." **Ages of experience show that in truth and in fact it is pure Medical Trade Nonsense.**

Symptoms of Carbon Monoxide Poisoning

To have a better picture of this Medical Illusion, we shall consider some of the Symptoms of Carbon Monoxide Poisoning. Dr H. G. Beck called attention to the fact that certain so-called diseases are but the symptoms of slow carbon monoxide asphyxiation. These symptoms he found to be chiefly: headache, dizziness, nervousness, nerve and muscle pains, digestive disturbances, fatigue, restlessness, depressed feeling, shortness of breath, palpitation. Other symptoms were mental confusion, difficulty in talking, symptoms of stomach ulcer, anemia, hyperemia and typical angina pectoris. All these "symptoms of diseases" disappeared, some very promptly, when nothing more was done than to remove the patients into pure air, free of carbon monoxide gas. We have mentioned some of the Symptoms of Carbon Monoxide poisoning. For the doctors call these conditions "symptoms of disease." There is no disease. According to the doctor, the patient is suffering from the "attack" of some disease, and gives it a name after studying the "symptoms." **Then he prescribes some remedy according to the teachings of his school.** Consider the preposterous medical claims regarding "symptomology and diagnosis" - the "most important branches of general pathology."

"General pathology" amounts to less than a cup of cold water. Also consider the ridiculous medical claims of "war against disease", that germs are the cause of "disease", that by the use of Vaccines, Serums and Filthy Poisons, the Medical Trade will "stamp out disease." There Are No Diseases.

As you reflect on these False Medical Theories, and practices, fix in your mind the fact that **"medical art" is the biggest frauds on earth**, and so proclaimed thru the ages by the leading doctors around the world.

The Doctors, Nurses, City Health Authorities; all of them have black lungs undergoing a process of degeneration, the same as their patients. The Doctors drop dead just as their patients do. Read the accounts in the daily press.

The mal-treatment by "science" here illustrated, was continued until the body was so weakened, that it was at last unable to recover and react because of the gross interference with its functions, and **it slowly succumbs.**

But, **it succumbs to the power of the poisons administered by the "Scientific" and Misguided Physician, who would have the body function as he wants it, and not as Nature would have it.**

To "treat" the affected parts, the parts that exhibit the symptoms of "disease", is to ignore the purpose of the body to thwart its efforts, and to force upon it an inimical condition that it was striving to cast, off. The Medical Trade "scientists" to assault and attack the body, or any of its parts or functions, **with Drugs, Serums, and Surgical Knives. To do so, must Lead Only To Permanent Injury.**

Many persons have sunk almost to the brink of the grave, as Cornaro did, and then turned to Nature after losing faith in the Medical Trade, and their worthless methods, and not only regained health but lived a long and useful life [Luigi Cornaro was a 16th-century Venetian nobleman who achieved fame by overcoming severe illness through extreme dietary moderation, detailing his regimen in his classic work The Art of Living Long.

His core principles centered on strict portion control and disciplined temperance]. There is the case of John Bailes, in England, who suffered in middle life from a severe illness in a chronic stage, and was unable to find any doctor who could help him.

The Medical Trade Doctors told him he could not get well, and had only a short time to live. He turned to Nature, adopted a strict mode of living, and lived to 128 years old." - George R. Clements, in "Live Better", 1962.

Chapter 41

The False Paradigm Of The Medical Trade

"All Science Is Empirical Science: All Theory Is Subordinate to Perception; A Single Fact Can Overturn An Entire System." *- Frederik van Eeden, in "In van Lommel", 2010.*

"To Explain Something, of Which We Know Little, by Referring it to Something of Which We Know Less, A Very Common Error Nevertheless." *- Dr T. Inman, MD, in "British Medical Journal", 2 July 1859.*

"Lies Are Deliberate Falsehoods communicated to Deceive and Mislead Others:

"The rules are simple: They Lie to Us, We Know They are Lying, They know we know They are Lying, but They Keep Lying to Us, and We Keep Pretending to believe them." *- Elena Gorokhova, grew up in Soviet Russia and describes how she discovered the political deception surrounding her, in "A Mountain of Crumbs", 2010.*

"They discovered that Liars Tend to Speak in More Complex Sentences in an attempt to win over their suspicious counterparts. Baffling someone with Bullshit." *- Deepak Malhotra, Harvard Business School, in "Never Split the Difference", 2016.*

Lying Is A Tricky Business; it's not just about telling untruths, but understanding why in the first place. Whether it's a little White Lie or a Grand Exaggeration, Lies Reveal Some Interesting Things.

While spotting a lie can be tough, knowing why people lie helps us all navigate the World of Truth and Deception." - in "13 Truths About Lying", The Mind Collection, 7 December 2024.

"Who is this that darkeneth counsel by words without knowledge?" - Job 38:2

"Take heed that no man deceive you." *- Matthew 24:4*

"It was considered as an axiom that scientific investigations should aim solely at the pursuit of the truth, and consequently scientific journals should aim at publishing the truth. It seems their aim has been something else." *- in "How the Facts Are Suppressed in Connection with Bone Meal", 1964.*

Intentional Ignorance

The Medical Trade Deliberately Avoids Obtaining Facts or Confronting the Truth

"Most Ignorance Is Vincible. We don't know because we don't want to know. It is our will that decides how, and upon what subjects we shall use our intelligence. Those who detect no meaning in the word do so because, for one reason or another, it suits their books that the word should be meaningless." *- Aldous Huxley, in "Ends and Means", 1937.*

The Epistemic Corruption of the Medical Trade

"When a knowledge system importantly loses integrity, ceasing to provide the kinds of trusted knowledge expected of it, we can label this Epistemic Corruption. Epistemic corruption often occurs because the system has been co-opted for interests at odds with some of the central goals thought to lie behind it. There is now abundant evidence that the involvement of Pharmaceutical Companies Corrupts Medical Science. Much of the Corruption of Medical Science via the Pharmaceutical Industry happens through grafting activities. Kierkegaard in 1995 writes: "As the world changes, the forms of corruption also gradually become more cunning, more difficult to point out." In its Corruption of Medical Science, the Pharmaceutical Industry has borne this out." *- in* ***"Epistemic Corruption, the Pharmaceutical Industry, and the Body of Medical Science"****, Front. Res. Metr. Anal., 2021.*

False Premises

"At the root of the failings of current practices lie some fundamental misunderstandings about what constitutes illness. These misunderstandings have been compounded by conflicts of interest, by the ills of bureaucracy both in government agencies and in large commercial enterprises, by well-intentioned policies based on false premises." *- in "The Failings of Modern Medicine", Explore, November 2014.*

"It is disturbing to hear the numerous revelations of malpractice and ethical lapses committed by members of the medical profession. Some professors convey to their students that unethical practice is the right way to conduct oneself as a doctor. In another case, a 26-year-old married woman had been ill with fever, cough, anorexia; and noticeable weight loss over a period of two months. Her sputum tested positive for acid-fast bacilli, and a chest x-ray showed miliary tuberculosis.

She revealed that her mother had pulmonary Koch's disease.

In spite of sufficient evidence for a confirmed diagnosis, her physician advised a chest CT scan which cost her Rs 4,000 but did not alter the diagnosis.

All this only for a commission of Rs 1,000 from the radiologist! There are no free lunches in this world. The Conference of a Physicians' Association was held at a 5-Star hotel at a hill station by a Pharmaceutical Company to introduce a new molecule acting simultaneously on blood sugar and lipids. Of the 120 doctors who registered as participants, 88 were provided funds for their Hotel stay and Transport by the Company. At the end of the conference, the president warmly felicitated the Pharma Company boss. The cost of modern medical treatments is beyond the capacity of the middle class partly because of the huge expenses incurred by the healthcare industry in sponsoring gifts, honorariums, conferences, symposia and research grants which are eventually paid by the consumer. In today's scenario, it is almost impossible to be a good doctor." - in "The Medical Trade", Indian Journal of Medical Ethics, November 2016.

A Different Concepts of Scientific Knowledge, Health and Health Systems Needed

"The editorial "A call for a quite debate on the future of genetics research", Oman Med. Journal, May 2011. Genetics is just one trend of reductionism that pervades modern biomedical research and practice, preceded earlier by Germ Theory and is currently followed by the Nanotechnology. Biomedical knowledge is being constructed through empirical research based on a positivist approach. However, it is well recognized that this approach addresses only a fractioned part of the health and illness phenomena, Has Many Flaws and False Findings, and has a wide gap between research results and clinical practice (The trouble with medical journals, J. R. Soc. Med., March 2006).

Despite that, the problem is thought to be merely about accumulating more knowledge, developing high-tech interventions, and the application of harder measures for mitigation against such flaws and failures without realizing the vicious cycle that we get entangled within.

Experimental Design as the "gold standard" for Research in the Biomedical model is built to enhance the existing assumptions and beliefs of this paradigm.

Therefore, it is unable to see, let apart identify possible alternatives. In addition, the currently knowledge-accumulating, intervention-focused research model may not necessarily result in improved health care systems or practices.

Woolf and Johnson have studied the comparative efficacy of huge investments in technological innovations versus improving health system delivery ("The break-even point: when medical advances are less important than improving the fidelity with which they are delivered", Annals Family Medicine, November 2005). They have concluded that Technological Innovations may Cost More Lives Than It Saves. Moreover, the above Research drivers represent individual motives that are usually subordinate to the more

Powerful Forces of Institutional Motives Driving Global Research Enterprise.

The Market, represented mostly by Funding Bodies, and being one of the most influential drivers in this context. The effect of such individual and institutional drivers of Biomedical Research are more remarkable in the so-called "Developing World." As research is thought to embody "scientific wealth of nations" ("The scientific wealth of nations", Science, February 1997), developing countries copy research agendas and practices hoping to have a share of this wealth and help improve the health status of their populations.

The first step outside this vicious cycle is to recognize and acknowledge that Biomedical Research and Practice, as they exist, are neither optimal nor the best way to improve health of populations. This requires exploring, and Exploiting Different Concepts of Scientific Knowledge, Health and Health Systems." - in "Do We Need a New Medical Paradigm?", Oman Medical Journal, May 2012.

> ***"The modern Medical System, to the extent of of perhaps 80%, is nothing but a gigantic, cruel, ludicrous, lucrative, transparent fraud."*** *- Dr Ulric Williams, MD, in "New Zealand's Greatest Doctor Ulric Williams of Wanganui", 2003.*

> ***"In them is fulfilled the prophecy of Essias, which saith, By hearing ye shall hear, and shall not understand; and seeing ye shall see, and shall not perceive; for this people's heart is waxed gross, and their ears are dull of hearing, and their eyes they have closed; lest at any time they should see with their eyes, and hear with their ears, and should understand with their heart and should be converted, and I should heal them."*** *- Matt, 13:14-15*

Apology

"The only reason for perpetrating this pamphlet is that resources for dealing with disease are available so far in advance of anything in orthodox use or view, that silence would be a crime. The writer's only excuse is that having been snatched, Solely by Grace of the One Healing Life-giving Power, from the very brink of destruction, and since then precariously preserved, an obligation has been placed upon him, by the same Power, to Co-Operate in the Purpose for which he's been spared.

Spiritually Insolvent

If ever a misbegotten system cried and begged for reform, it is the medical system today. Arbitrary and tyrannical, the medical, of all the great instruments evolved by physical man to his own undoing, is one of the most unspiritual.

Far indeed from solving the problem of disease, misaligned modern medical "science" has become in fact the second in importance of its two principal causes, the first being that people continue living unhealthily. Those who have usurped authority in matters relating to health and disease know nothing of primary cause.

They Do Not Know What Health Is, Nor How It Is Maintained.

They Do Not Know What Disease Is. Nor How It Is Brought About.

They Know Nothing of the Natural or Spiritual Resources Either for Maintaining or Regaining Good Health.

All that remains is artificial expedients for dealing with effects; and a smiling land uniquely endowed for wellbeing, littered and plastered from end to end and from side to side with the sick, the maimed, and the dead, is tragic evidence of inadequacy. **The Medical Trade failure can no longer be minimised. It becomes continually more conspicuous and acute. As with most of his systems, this failure attests Adamic impotence competently to contend, from limited human resource, with problems always ultimately non-material. No one in particular is to blame. Censure is not involved. Methods are at fault. Vision has been restricted to the physical; but, now, we must "look with three eyes."**

Intellectually Bankrupt, As Well?

People, particularly medical men, are obsessed by fear of disease.

They live in unthinking dread of disease as some sort of inevitable reality, which must be "prevented" or "cured".

Medical Practice is inspired by; inculcates, and couldn't exist without fear.

But, mostly, we cause our disease ourselves, if we didn't, there wouldn't be much disease. **There's little to fear, for those who live healthily.**

And if we wish to be rid of disease, the one imperative need is: Stop Causing Disease. It is strangely (because spiritually) paradoxical that, with good health, happiness, safety and prosperity among his most eagerly sought objectives, man should have devised means to these ends which are increasingly materialising their opposites. Medical Trade Doctors are for ever toiling to fight, treat, "cure" or prevent disease. But that isn't their job. The more people "fight disease", the more and the worse the disease, and the bigger the hospitals.

Faulty Nutrition:

The Influence of Diet; Need for Investigation

> *"Notwithstanding the great advance in our knowledge of* ***the value of diet regulation in the treatment of disease****, very few hospitals of to day are adequately equipped to feed patients properly according to modern dietetic principles." - Dr Charles Clyde Sutter, MD in "New York State Journal of Medicine", Vol.14, 1914.*

> *"Admission to public hospitals increase 126%; to mental hospitals 105%.*
> ***There was no more important factor for those interested in the physical welfare of the people than Nutrition****, and it was becoming increasingly apparent that* ***the diet of the people right from birth needed investigation."*** *- Sir James Elliott in 1938*

The state of Health of the Society, shows the state of its accepted philosophy and principles of Medical Trade Practice.

Overcrowded City Hospital, Warning to Wellington

> *"Total average of patients 6 years ago was 580. The daily average last month was 1,931. In 1934 waiting lists were comparatively small except for one section. Today there were 1,138 patients on the waiting list: 12 months ago it was 741." - Dr A. R. Thorne, Retiring Superintendent's Report, in "Auckland Star", 10 December 1940.*

The Only Effective Way to Combat Disease is to Cultivate Health

Nature, God, the Life Power, that is, will, almost always, restore us to Health and keep us well... if we do our part. And our part is Willingness and Obedience.

Medical Trade Doctors "fight disease", but neither teach, encourage even allow (and seldom practise), good health.

Yet all most people need do, to become or keep well is: Live Healthily, And Cooperate Intelligently With Nature's Efforts To Heal.

> *"Prejudice squints when it looks, and lies when it speaks."*

Practically the entire system of modern Medical Trade, So-Called Science is founded upon a misconception that mistakes: an Effect for the Cause, and the Symptom for the Disease.

Searching, outside ourselves, for the cause, and "cure", of troubles arising within, there were discovered, sometimes associated with certain phases of the disease process, minute living organisms or "disease germs."

It was concluded, not unnaturally but totally erroneously, that these were the cause. More enlightened reasoning discloses, however, that "disease germs," when present at all as a relevant factor, which is comparatively seldom, are merely an accompaniment, usually an effect, and Never the primary cause of the disease process. **Medical men invariably look in sick bodies for the cause of disease.**

That is one reason why they never find the real cause; for the primary cause of disease is Never in the body, that's where effects appear.

The Cause will almost always be found In The Mind Or The Manner Of Life (or both). That is where the cause must be sought and correctives applied.

Health Glossary

Medical Trade "diagnosis", "prevention" and "treatment", are based upon the transparent absurdity that "germs" are the cause of disease!

Thus the manifold abuses really responsible are ignored, and so allowed, and even encouraged to continue.

Diagnosis - Consists chiefly in giving some symptom a name, usually, as experience has shown, a wrong one. Together with "investigation", and "observation", it serves, for the most part, to conceal the fact that would-be healers have not the remotest idea what is really amiss.

Treatment - Is mainly masking, modifying, or temporarily abolishing symptoms or effects, most of which disappear of themselves when the cause in the mind or the manner of life is put right.

Medical Trade Education - Is throwing dust in people's eyes to keep them in ignorance.

Immunisation: Consists of inoculating deadly and unpredictable disease into healthy bodies, to keep them well.

Research - specially the sinister industry called "cancer research", signifies devising continually "improved means to unimproved ends."

Million upon pitiful million of defenceless creatures, entrusted by our Creator to man's care, are doomed, in its name, to futile revolting cruelty, and death. The whole sorry, materialistic, unprofitable, cruel, ludicrous, lucrative fraud persists, mainly, because nobody thinks.

The merit of enlightened testimony can often be gauged by the ridicule, scorn, and opposition evoked. **The most arduous task in life is persuading people to see the self-evident; and the shortest road to disfavour is witness to truth.**

Few are yet governed by reason. The more logical and incontrovertible any proposal, the more inevitable the reaction of stubbornness, prejudice, fear, tradition, self-interest, or mistaken belief. People don't think, won't even try.

People are still ruled by their unconscious minds. People act and react automatically and instinctively in terms of conditioning to stimuli arising in their physical selves or environment.

Not 1 of our 4 great systems: Educational, Financial, Medical, or Political, could survive 5 minutes, logical examination hacked by honest action.

But if civilisation is to survive and the new age be born, the unthinking, instinctive must give place to the Spiritually Logical, action and reaction.

Omnipresent, Omnipotent, Omniscient Good

There is only One Healing: Living, Loving, Life-giving Motivating Power in the Universe. That Universal Life-giving Power, and the Life Force in ourselves, are One and the same. There is not, never has been, never will be, and never need be, but this **One Source of Healing and Health. Among His resources and attributes are goodness, good health, happiness, safety, and prosperity; knowledge, wisdom, understanding; creative power and spiritual love.**

That Power manifests in and through us, in terms of His Own Nature, and the degree of our response If We Do Not Prevent.

And if, through ignorance, folly, or sin, we stand in the way, and poor health, misery, ruin and chaos result, why... get out of the way?

Because the Power will manifest When We Stop Preventing Him.

Remember:

“The Law”, through which alone the Power of Good can express.

Why Be Ill?

There are 3 Absolute Indispensables of Good Health:

1. **A confident, quiet, contented, charitable, health conscious, mental outlook and habit of thought.**
2. **Reasonable moderation and wise choice of foods: avoid, like the plagues they produce, refined or faked foods.**
3. **Healthy general habits, with regard to sufficiently active outdoor exercise, rest, water within and without, breathing, clothing, and posture.**

There are numerous others, of course; but observe all these, and we shan't go far wrong.

To the degree of our falling short, does disease result:

1. **Negative Emotions.**
2. **Impulses.**
3. **Impressions.**
4. **Suggestions.**
5. **Thoughts, or Beliefs, either conscious or unconscious.**
6. **Gluttony and Food Foolishness.**
7. **Sloth.**

These are the great fundamental reasons for disease, to which must be added Therapeutic Efforts at Cure.

The Physical Roots of Disease are:

1. **Toxic Accumulation**
2. **Vitamin and Mineral Deficiency**

Whatever symptoms may be, please note that carefully, Whatever They May Be, **the Cause will almost invariably be found In The Mind or The Manner of Life.**

Men are sick in their bodies because they are sick in their souls; and they are sick in their souls because they do not comprehend the relationship between themselves, as individualisations of it, and the One great Universal Motivating Life Force and Intelligence.

Experience has shown again and again that, if the Causes are understood and put right, the symptoms or effects exhibit a commonly astonishing tendency to disappear of themselves, by reversal of the process that brought them about.

In case after case, no physical help is required.

When it is, make sure the expedients do help... not get in the way!

The Life Power the "Physician Within", will put things to rights, in body, mind, soul or estate, in the individual or in the mass, when men stop putting them wrong.

Can Nothing Be Done?

Don't be unduly disturbed if you've been told "nothing can be done."

Sooner or later, usually sooner than later, every sick person told that.

But this pronouncement is usually based on a false premise; and many a sufferer has regained good health after a death sentence from Medicine.

You may be unlucky when you're told "nothing can be done for you."

It is when Medical Doctors says it can that it's wise to beware.

If you, or a friend, or a relative are sick, Ask Yourself Why.

It is not, as a rule, what is outwardly wrong that counts, still less, what name it receives.

What really matters is, Why Aren't You Well?

Stop making yourself sick, and probably you'll get well!

Anyway, you can hardly expect someone to make you well, while, either wilfully or ignorantly, you go on thinking, eating, or doing, the things that are making you ill?

"For This Relief, Not Much Thanks"

Do we really suppose it possible to go on thinking like idiots, feeding like fools, and acting like knaves, **and get rid of the consequences by swallowing poison or having pieces cut out?**

People are terrified of disease, but not in the least afraid of living so ignorantly, so stupidly, so grossly, so idiotically, so swinishly as to make catastrophe inevitable.

Not till God's healing begins, do they panic for protection to men mostly in like case with themselves. And then it is relief the sick crave, not reform.

The Medical Trade undertakes, at a price, which, eventually the healthy must pay, to oblige.

But The Price Has Become Too High.

Please Understand

Disease - Whether of body, mind, soul, or estate, whether in the individual or in the mass, is mostly: A More or Less Gradual Degenerative Process, going on within, due to failure to comply with the requirements of well-being.

Of this process: Acute Illnesses are commonly Natures Method of Cure.

Healing - Whether of body, mind, soul, or estate, whether in the individual or the mass, is a More of Less Gradual Regenerative Process, the outcome of Repentance and Obedience to Law.

A Millennium Held At Bay!

Even partial appreciation of Acute Illness as commonly curative will banish the fear of disease and loosen its Hold Torpedo the Medical Trade Craft, and throw light upon the Divine redemptive evolutionary plan.

Human bodies, impelled by the "Healer Within", are Self Cleansing, Self-Healing "machines".

Toxic accumulation, from unwitting or wilful abuse, gives rise to disease.

To prevent it, the body reacts from time to time, and extrudes, through the eliminating mechanism put there to that end, this poisonous waste.

When it does so, we are temporarily upset or “ill”. Much fever is a fermentive reaction, the purpose of which is to burn up waste.

“Disease Germs”: are mostly man's friend. Their main mission in life is destruction of filth. They are produced by and bred in disease.

If you don't want their presence or help, Keep Your Bodies From Gathering Filth, And Live On Live Foods.

Most Acute Illnesses are Nature's (God's) method of ridding our systems of waste, which would otherwise cause disease.

They are “house-cleanings”, **“Healing Crises”**, preventing collection of dangerous dirt.

They are Nature's protecting reactions against existing disease.

But for Acute Illnesses, the human race would have ceased to exist long ages ago. Suppression of such protective reactions, however seemingly adroit, is, usually, the height of unwisdom.

A big proportion of chronic disease is a direct result of suppression of Acute Illnesses. Yet the one really impressive achievement of Medical Trade “Science”, is the increasingly effective suppression of acute illnesses.

Believing these Illnesses caused by the “germs”, Medical Trade Medicine kills millions of germs, and almost as many men.

Abolishing symptoms which are Nature's warnings, or (worse still) evidences of her efforts to heal, without adequate measures to deal with their cause, is merely preventing Nature from achieving her beneficent purpose of protecting us from the consequences of error or sin.

To employ to this end (as Medical Trade does), means almost invariably destructive and disease, producing in themselves, is surely to plumb the last depths of human ignorance.

Who Really Cares?

Hospitals (as we have known them) are Disease Factories, Turning Out Corpses and Chronics, Like Sausages From a Machine!

The sick go to hospitals for relief. Essential reform is never given a thought.

Hospital activities, being mostly spiritually misaligned, consist, in too many cases, of attempted and often irrelevant suppression, by purely physical means, of symptoms or effects, by ineffectual and illogical means to wrong ends.

By calamitous, though almost always kindly intentioned enough, wrong methods, based upon an almost complete misapprehension of its nature and origin, they repeatedly cause disease and prevent recovery.

The sick have their symptoms cut, burned, and doped; but few indeed are restored to good health thereby!

9 Out or 10 Who Become Ill, Need and Ought Not!

And 3 out of 4 of the Sick Who Today are Packing our Hospitals To Capacity and Miles Beyond, Need, Never Darken Their Doors.

They could, and should, get well in their homes; and would, If They Stopped Making Themselves Sick.

The only correct solution of the problem of Hospital accommodation is... reduction of the demand. By adoption of Principles here given, we can half empty our hospitals in the first few weeks; and thereafter progressively lessen the need for beds. Health Reform is a national, individual, Spiritual-cosmic, inexorable Demand.

In Terms of Conditioning

1. Hospital Boards don't think: administration consists of development and extension of things as they've always been. Policy wrongly assumes that the self-styled “expert” knows his job.

2. Education Authorities won't think. Besides, the higher the Allopathic Medical “education”, the less, in too many instances, the capacity to think.

3. “Religious” and Political Organisations refuse to think, and emphatically deprecate any such tendency. If people began to think, they'd be among the first to go.

4. The Poor Public can't think, they are taught not to think. And any possibility that they might, is carefully guarded against by misleading propaganda ceaselessly let loose through all channels of publicity.

5. The Medical Trade simply daren't think, their, stuff is based upon such obvious and demonstrable fallacies. More over, they are only too uneasily aware that whenever anyone thinks bang goes the Medical Trade.

Our Brothers Keeper?

Meanwhile there are tens of thousands of wretched sufferers, who can easily, quickly, cheaply, painlessly, and safely get well, if they like. And thousands of thousands more, who would rather be killed by Medicine, than recover by common sense. And thousands besides who would rather die than get well. And how many others who will, in time, become sick, but ought Enough Is Already Known to enable us Now, To claim for most if not for all of these, good health and immunity. And every endeavour is being made, by interests battening upon avoidable miseries, to bamboozle people and conceal the truth.

Mene, Mene, Tekel, Upharsin! (New Zealand)

That's been the way of our world. But the Kingdom of Heaven is at hand.

We are offered salvation, deliverance, from poverty, sickness and sin, on ascending scales of New Life. Shall we wallow, like hogs, in the muck?

The challenge of this rapidly intensifying world Epoch is: response to a spiritual standard. That challenge cannot be evaded.

The writing is on the wall. We are being “weighed in the balance”.

The God of Battles has drawn His sword... and heaven help those who are “found wanting”. **“Expect Ye Repent”:** The diseased condition of our people, stock, crops, and soil, is a national menace, without further colour of excuse.

This little land was created, is commissioned, and must be consecrated to lead the world in the new era of health and prosperity.

But health and regeneration, whether of body mind soul or estate, whether in the individual or the mass, can “be had only” in terms of Repentance from error and sin, and Obedience, to spiritual-cosmic law. But obedience to His Law comes only through sufficient response to the Spirit of Good. The Law, of itself, cannot redeem.

The Valley of Decision

There are not lacking those who, given understanding, will place truth and honour above prejudice and self interest. Such will be prepared to live healthily and spiritually, logically whatever the cost to themselves; counsel befriend, or instruct (as opportunity offers); and unite with others like, minded in fostering a private and public Consciousness that will give exploitation pause. The extent of our co-operation will be the measure of our sincerity. **Love of Good cannot be expressed except by obeying His Laws.** The world is in painful process today of teaching itself that man cannot, successfully, conduct his affairs from limits of human resource Let the craven, the glutton, the sluggard, the exploiter the humanly self-confident, repent, obey, and be healed. Whether or not the New Age will be born depends, perilously, upon increasing individual sensitivity, receptivity, and response to the Spirit and Law of Life. Only so can Divine Plan, Process; and Purpose come to fruition. Far be it from the writer to belittle those whose professional attainment, devotion, and self-sacrifice are far in advance of his own. If defective methods and beliefs have been pilloried, it is, in confident anticipation of the day, soon to be, when, united in increasingly enlightened dependence upon spiritual-cosmic Principle, we enter, under Him "upon whose shoulder the Government is", into the New World Order." - Dr Ulric Williams, MD, MB, Ch.B., in "Hospitals and Hooey or Health?", 1941.

> *"According to our point of view* ***it is self-evident that medicine involves the art of healing — although the most recent developments in medicine may make it appear as if this had hardly anything to do with the matter. Only those who regard healing as the ultimate goal of their efforts can, therefore, be designated as Physicians. Ever since we recognized that diseases are neither self-subsistent, circumscribed, autonomous organisms, nor entities which have forced their way into the body, nor parasites rooted on it, but that they represent only the course of physiological phenomena under altered conditions — ever since this time the goal of therapy has had to be the maintenance or the re-establishment of normal physiological conditions.*** *The actual accomplishment or, put more precisely, the striving for an actual accomplishment, of this aim comprises the task of practical medicine. Scientific medicine, for its part, has as its object* ***the investigation of those altered conditions which characterize the diseased body or various ailing organs, the identification of abnormalities in the phenomena of life as they occur under specifically altered conditions, and, finally, the discovery of means for abolishing these abnormal conditions. It presupposes therefore a knowledge of the normal course of the phenomena of life and the conditions under which this course is possible. It is therefore based on physiology. Knowledge which is unable to support action is not genuine – and how unsure is activity without understanding."*** *- Prof. Dr Rudolf Virchow, MD in "Standpoints in Scientific Medicine", 1847.*
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> ***"It Appears that The Actions of the American Medical Association, more than 80 years ago, and today may be More Financially Driven rather Than Health Related."*** *- in "The Endocannabinoid System and Cannabis", 2019.*
>
> ***"Experience has proven that those who have previously studied medicine, and afterwards tried to add Osteopathy, have been but a hindrance to the science. An allegiance to drugs once established, is almost impossible to overcome.*** *After careful consideration, therefore, it has been established that as a general rule no person shall be admitted as a student who has previously studied and practiced medicine. It is desired to make successful operators of all who enter the school, and results have shown: The non-medical student far surpasses those who have studied medicine." - in "Journal of Osteopathy", Vol.1, No.1, May 1894.*

Death from Hospital Acquired Pneumonia

"Hospital Acquired Pneumonia is defined as an inflammatory condition of the lung parenchyma caused by infectious agents not present or incubating at the time of Hospital admission; that is, conditions that develop more than 48 hours after admission. Death from Bacteremic Hospital Acquired Pneumonia occurred in 20% of patients within 1 week of their first positive blood culture, and Pseudomonas Aeruginosa Bacteremia was associated with the highest mortality rate (45%). The mortality rate in this study was similar for both the Intensive Care Unit (22.2%), and non-ICU patients (17.6%)." *- in "Clinical practice guidelines for Hospital-Acquired Pneumonia, and Ventilator-Associated Pneumonia in adults", Canadian J. Infect. Dis. Med. Microbiol., 19 January 2008.*

The Risk and Mortality Associated with Hospital Acquired Pneumonia

"The incidence Risk and Mortality Associated with Hospital Acquired Pneumonia in England. Estimates suggested that in England each year 72,542 people Develop Hospital Acquired Pneumonia, with 15,072 Associated Deaths. The estimated incidence Risk is 4.2 per 1,000 admissions. Hospital Acquired Pneumonia is a lower respiratory tract infection that presents 48 hours, or more, after admission to Hospital, or in the community in patients who were admitted to hospital in the previous 10 days. A European point prevalence survey demonstrated that Hospital Acquired Pneumonia is the most common type of Healthcare Associated Infection, accounting for 21.4% of all infections acquired in the Hospital setting. It has been estimated that Healthcare Associated Infection cost the NHS in England up to £2.8 Billion per year." *- in "The incidence risk of Hospital acquired pneumonia and associated mortality in England between 2018 and 2023", Project Report, NHS, 2 July 2023.*

"The incidence of Hospital Acquired Pneumonia; ranges from 5 to more than 20 cases per 1,000 patients admitted in Hospital. Hospital Acquired Pneumonia; has the highest rates observed in the elderly, those receiving enteral feeding through a nasogastric tube, immunocompromised hosts, and surgical patients. About 1/3 of Hospital Acquired Pneumonia Develop in Intensive Care Unit, with Ventilator Acquired Pneumonia accounting for 90% of cases. Ventilator Associated Pneumonia occurs in 9% to 40% of intubated patients and represents the most frequent ICU-acquired infection. The frequency of Hospital Acquired Pneumonia in Medical Intensive Care Unit of our Hospital is 88 out of 346 (25.4%). The Mortality from Hospital Acquired Pneumonia is 47.7%." - in "Frequency of Hospital Acquired Pneumonia", Pak. Jour. Med. Sci., Jul-Aug 2016.

Open Letter To The Medical Trade & To The Politicians Who Blindly Follow It

The Damage that you have Caused! The Misery that you have Inflicted! Surely there will be a **Day of Reckoning** for those who have **Defrauded Many a Nation; of their Wealth & Health.**

> ***"It is high time for me to put an end to your sitting in this place, which you have dishonoured by your contempt of all virtue, and defiled by your practice of every vice. Ye are a factious crew, and enemies to all good government. Ye are a pack of mercenary wretches,*** *and would like Esau sell your country for a mess of pottage.* ***Ye have no more religion than my horse. Gold is your God. Which of you have not bartered your conscience for bribes?*** *Ye are grown intolerably odious to the whole nation.* ***Yourselves become the greatest grievance.*** *Country therefore calls upon me to cleanse this* ***Augean Stable****, by putting a final period to your iniquitous proceedings; and which by God's help, and the strength he has given me, I am now come to do.* ***I command ye therefore, to depart immediately out of this place. Go, get you out! Make haste! In the name of God, go!"*** *- Oliver Cromwell,* ***Lord Protector of the Commonwealth****, dismissing Parliament, United Kingdom, 20 April 1653.*

Compulsive Lying Syndrome Affecting the Medical Trade

It's beyond any doubt that **Medical Trade Suffers from; Chronic - Not Acute, but Chronic - Compulsive Lying Disorder.**

All Medical Trade Research Is Fraudulent Until Proven Otherwise

"The first step in solving any problem is recognizing there is one. And when it comes to our health we have a major crisis. A crisis so huge that the National Health Service can no longer cope with the demand being placed on it driven by the Pandemic of Chronic Physical and Mental Disease.

We have an "Epidemic of Misinformed Doctors", and "Misinformed Patients" rooted in "Corporate Greed." The Lies of Big Food and Bad Pharma Are Destroying Lives on an unprecedented scale. The situation is so dire, that the former Editor of the British Medical Journal, Richard Smith recently asked whether it's time to assume: "All Health Research Is Fraudulent Until Proven Otherwise?" And he's not alone. A few years earlier, the Editor of the Lancet, Richard Horton in a editorial wrote "that possibly half of the scientific literature may simply be untrue." And that "Science had taken a turn towards darkness"." - Dr Aseem Malhotra, MD, in "Public Health Collaboration", 23 August 2021.

> ***"Medical decision-making involves high degrees of uncertainty and clinicians are prone to reasoning errors."*** *- Thomas Grote, Philipp Berens, in "On the ethics of algorithmic decision-making in healthcare", BMJ, Journal of Medical Ethics, 20 November 2019.*

Pseudologia Fantastica
Layers of Deceit

> *"Pseudologia Fantastica, pathological lying or mythomania, is a mental disorder characterized by persistent, pervasive, and often compulsive lying. Pseudologia Fantastica causes dysfunction in many realms of life. Individuals with Pseudologia Fantastica create elaborate, exaggerated narratives. Typical lying, which involves deliberate deception for a specific purpose." - in "Pseudologia Fantastica", StatPearls, January 2026.*

Pseudologia Fantastica, pathological lying, mythomania, deception syndrome, is a psychiatric phenomenon characterized by chronic, compulsive, and elaborate fabrication of stories, where individuals habitually convey falsehoods.

Coined in 1891 by German physician Anton Delbrueck, it describes lies that are disproportionate, fantastical, and often lack a clear, immediate motive, often bordering on the edge of belief.

> *"Pathological Lying is defined as a disproportionate falsification. The term 'deception syndrome' for individuals who pathologically deceive for internal (i.e. psychological) as opposed to external reasons such as financial gain. Akimoto et al., 1997 and Dice et al., 2005 note that a better understanding and exploration of PF are necessary to bring a better awareness of the implication that untruths have on legal, medical and social consequences." - "Pseudologia Fantastica: Forensic and clinical treatment implications", Comprehensive Psychiatry, January 2015.*

Lying has become an integral part of normal psychological behaviour of the Medical Trade; where feelings of shame or guilt, are non existent.

> *"Pseudologia fantastica is characterized by the creation of eloquent and interesting stories, sometimes bordering on the fantastic, that are told to impress others. These stories may seem to be just on the verge of believability and often involve the patient assuming important and heroic roles. Patients react to questions or doubts with ad hoc elaborations in order to satisfy the listener. Thus, new lies are needed to supplement the old, and patients sometimes start to believe their own deceptions." - in "Unusual and Rare Psychological Disorders: A Handbook for Clinical Practice and Research", 2017.*

The Original Hippocratic Oath

"I swear, by God as my witnesses, that, according to my ability and judgement, I will keep this Oath and this contract: I will use those dietary regimens which will benefit my patients according to my greatest ability and judgement, and I will do no harm or injustice to them. I will not give a lethal drug to anyone if I am asked, nor will I advise such a plan; and similarly I will not give a woman a pessary to cause an abortion.
In purity and according to divine law will I carry out my life and my art.
I will not use the knife, even upon those suffering from stones, but I will leave this to those who are trained in this craft. Into whatever homes I go, I will enter them for the benefit of the sick, avoiding any voluntary act of impropriety or corruption, including the seduction of women or men. Whatever I see or hear in the lives of my patients, whether in connection with my professional practice or not, which ought not to be spoken of outside, I will keep secret, as considering all such things to be private.
So long as I maintain this Oath faithfully and without corruption, may it be granted to me to partake of life fully and the practice of my art, gaining the respect of all men for all time. However, should I transgress this Oath and violate it, may the opposite be my fate." *- in "National Library of Medicine", 2002.*

"It is a sad fact that a Surgical Intervention constitutes an admission of failure of Medical Treatment. The surge of aorta-coronary bypass operations gives testimony to the Absence of Effective Medical Treatment Directed to Alleviate or Eliminate the Cause Underlying the Disease Process." *- in "Nutrition News", December 1982.*

Moral Philosophy

"Address to The Council of the University of London:
Circumstances connected with the progressive march of knowledge, which so conspicuously distinguishes the period in which we live, have placed within your power the opportunity of improving greatly the system of education of young men designed for the Medical Profession; and, certainly, none of the objects of the New University, over which you are appointed to preside, is of more general importance than the promotion of the study of medicine.

To it, indeed, in my humble opinion, is the University to look for a large share of its prosperity, provided the system of instruction which it shall follow be settled upon a sound foundation, and embrace as its object the formation of efficient medical practitioners

With regard to Moral Philosophy, at least that part of it which relates to **the Philosophy of Mind, being regarded as a branch of medical education**, there can be only one opinion.

The Connexion Between Mind and Body, the influence of each upon the other, both as regards the Production of Diseases and the Cure of Them, Are Too Obvious to have escaped the eye of the most ordinary medical observer; And The Faculty of Taking Advantage of This Reciprocal Influence in The Treatment of Diseases, Constitutes One of The Highest Qualifications of the Physician.

In that class of diseases in particular, which, from their effects upon the mind, have been termed mental, a previous knowledge of the faculties of mind is absolutely requisite; **for although it may be doubted whether we can with propriety speak of a diseased state of mind, insanity, perhaps in every instance, Being Dependent on Some Morbid State of the Body;** yet it is undoubtedly necessary that he who undertakes the cure of insanity should be acquainted with the human mind in what is usually termed its sane state; or how can he presume to investigate those causes which affect its operations, and to trace their results?

To the want of this previous knowledge, and to the neglect of the philosophy of mind as a branch of medical education, is to be attributed the melancholy truth, that the treatment of insanity is that part of medical practice which has advanced least in modern times: and to the same cause must be assigned those unsatisfactory opinions which are delivered by medical men in courts of justice, in cases of supposed or real mental derangement; opinions which not only place those who deliver them in a point of view very different from that in which he who is anxious to be supposed a master of his profession would desire to appear, but are even not unfrequently derogatory to the profession itself.

It is unnecessary to dilate upon this part of my subject: enough has been said to prove, that part of Moral Philosophy which is connected with mind should be regarded as a branch of medical education; and if this be admitted, its study should be made imperative, as a part of the medical course to be followed in the New University.

"Medical Ethics"

It refers to the conduct of the practitioner in his professional connexion with his professional brethren, and **with society.**

Daily experience proves that brilliant talents, that the most scientific acquirements, and a perfect knowledge of his profession, have not in every instance insured to the individual possessing them the public confidence; whilst men of much less erudition, with not half the professional acquirements, and with very inferior judgments, have enjoyed an enviable degree of celebrity and public esteem. To what are these circumstances to be ascribed, if they be not connected with something in the conduct and deportment of the individual which attaches others to him, gives a favourable impression of every thing he does, and inspires confidence in his opinion? As far as the profession is concerned, the conduct of the practitioner requires to be guided by principles of candour and liberality, avoiding every thing which can in the smallest degree lower the character of those with whom he is obliged to act in concert, or whom he may have Superseded In The Confidence of a Patient, in the treatment of any

case: his manner should be a guarantee that he feels the responsibility of his situation, that he practises his profession in earnest; and mild, affable, and conciliating, with a high sense of honour, he should endeavour to win the confidence and friendship of his patients, if he expect to prove successful in administering to their relief. To Possess an Ascendancy Over The Minds of Others Is Of Primary Importance To A Medical Practitioner: It Has A Powerful Influence On The Success Of His Prescriptions, and is a striking illustration of the part which mind plays in the cure of diseases. The Method of Attaining Such an Influence, therefore, Ought to be Pointed Out To Everyone About To Enter Upon The Practice of his profession. I have proposed that the delivery of these should form a part of the duty of the professor of the Practice of Medicine. I will now endeavour to describe in what manner each of the studies contained in the course which I have presumed to offer to your consideration should be taught.

No method of communicating scientific information arrests the attention of the student so forcibly, and consequently is so instructive, as that of lecturing.

The pupil finds himself, in the lecture-room, one of a numerous body of auditors, all anxiously engaged in the same course of studies; a circumstance alone sufficient to arouse his attention, and to convince him of the importance of the object of his pursuit." - in "Thoughts on Medical Education", Address to The Council of the University of London, 1826.

The University of London was founded 10 years later in 1836, as a degree-awarding body, its Constituent College, University College London, began then, offering Medical Courses in 1834.

What Does the Medical Trade Know About Healing the Sick?

"A Physician may have spent 4 Years in a Medical College; he may have received the degree of Doctor of Medicine; he may be a legalized Practitioner of Medicine; he may be a member of one or more Medical Societies, a Professor in some Medical College, but, what does he really know about healing the sick?

When a Doctor is graduated from a Medical College, he is "supposed" to know the cause, symptoms, and treatment of several hundred diseases; but, **how many can he actually Cure? Of what real value are all the courses of instruction, if they fail to teach the students a definite treatment for the diseases that are more or less common to our country?** A stream is no higher than its fountainhead; **if a Professor in a Medical College is himself unable to treat successfully the diseases prevalent in our country, it is obvious that he will be unable to impart healing-skill to his students. Some Medical Colleges have cut out Materia Medica from their curricula (Pharmacopoeia of Medicinal Plants and the Remedies that can be obtained from them). The Medical Colleges that fail to teach their students, by eliminating the chair of Therapeutics."** - in "What Do You Really Know About Healing the Sick?", Clinical Medicine, 1919.

"Bitters, nauseating drugs, and spices of all descriptions, are taken into the service of these untaught prescribers. One cures with bog-bean; another with gentian root; a third with ginger-tea; and ***were their materia medica restricted to articles equally simple, comparatively little harm would results, But They Deal In Endless Compounds; The Deadly Drugs In Double Doses Fly: and though they sometimes cure, They Much More Frequently Do Irreparable Harm."*** *- in "The Physician", The Belfast Magazine and Literary Journal, 1825.*

People Die For Lack Knowledge

"My people are destroyed for lack of knowledge: because thou hast rejected knowledge, I will also reject thee, that thou shalt be no priest to me: seeing thou hast forgotten the law of thy God, I will also forget thy children." *- in "Hosea 4:6"*

Vaccines & Their Toxins: A Major Factor in the Causation of Chronic Disease

"Our Air, Water, and Food Supplies, are completely compromised, is time to take matters into our own hands. There are over 80,000 Chemicals, used in Various Industries. There are over 2,000 New Chemicals being Introduced Annually. We breathe in these Chemicals, through Exhaust, Eat them through Food), wear them through Textiles (Clothing, Bedding, Furniture), use them through products (Deodorants, Cosmetics, Shampoos, Soaps, Gels).

Toxins accumulate in our fat cells; if they are not eliminated and interrupt normal bodily functions. Our body should be a finely tuned machine, with all of the Organs, and Body Systems; Working in Concert Together.

When Toxins Disrupt Normal Function; Problems Can Occur:

1. **Cancers.**
2. **Auto-Immune Diseases.**
3. **Neurologic Problems:**
    I. **Autism.**
    II. **Attention Deficit Hyperactivity Disorder (ADHD).**
    III. **Parkinson's Disease.**
4. **Most Prevalent Chronic Diseases:**
    I. **Obesity.**
    II. **Diabetes.**
    III. **Heart Disease.**

The Body has wonderful built-in systems, to help us Detoxify (Emunctory System). The Liver, and Kidneys do an exceptional job keeping up with filtering out the Toxins. Our Skin Release Toxins, in the form of Perspiration. Our Breath release Toxins (expel Carbon Dioxide and other Waste Gases) with each exhalation. When our Gut is healthy, and our Microbiome (100 Trillion organisms), our Bowel (Colon) Removes the Toxins.

Vaccinations As A Contributive Factor In The Toxic Loading And In Autism

We must wake up, and realize that: We Are The Masters of Our Domain.

If we don't look out for ourselves, and each other, we can expect to hear about more:

1. **Cancers.**
2. **Autism.**
3. **Auto-Immune Diseases.**

We have to wake up, out of our trance, and: Stop Following Bad Advice.

Newborns are being over-burdened with Preservatives and Adjuvants in Vaccines. The Adjuvants, like Aluminium, are Harmful to Nervous System; at the Expense of Neurologic Diseases; Autism, and Attention Deficit Hyperactivity Disorder (ADHD), are increasing at alarming rates. In 1980's, the rate of Autism was 1 in 1,000 Children. As of 2010, the rate of Autism in the U.S. is 1 in 68 Children. Why we Vaccinate newborns for hepatitis B? A Sexually Transmitted Disease! We Expose our Newborns to Toxic Aluminium (Adjuvant in the Vaccine), at 1 day of life (24 Hours). The more mindful you are at reading labels, thinking about what you are ingesting, will go a long way toward: Living a Life Free from Chronic Disease. Never assume that products are safe, just because they are on a Store Shelf. By Educating your loved ones, you will actually Help Society Reduce the Chronic Disease Burden." - Dr Daniel Neides, MD, Medical Director, Chief Operating Officer Cleveland Clinic Wellness Institute, in "Make 2017 the year to Avoid Toxins", Cleveland Clinic, 6 January 2017.

Highest Infant Mortality Rates Are Seen Vaccinated Children

"Children's Health Defense scientists Brian Hooker, PhD, and Karl Jablonowski, PhD, conducted the analysis, published in Preprints: "Increased Mortality Associated with 2-Month Old Infant Vaccinations", 22 December 2025.

> ***"The highest infant mortality rates were seen when children received all 6 of the recommended Vaccines in 1 visit. In addition to elevated mortality, the Vaccination schedule also increased the likelihood that children were more likely to Die of non-leading causes of death."*** *- Dr Brian Hooker, PhD*

Children Vaccinated in Their Early Months of Life Are More Likely to Die

> ***"We received correspondence from Preprints, saying that they are going to retract the paper, with no explanation as to why. When you have a paper that has so much reach, and so much implications to retract it, especially without cause, is poor practice. In this paper, we demonstrate from the State of Louisiana Data, that children who were Vaccinated in their 2nd month of life, were more likely to Die, in their 3rd month of life. And that was statistically significant."*** *- Dr Karl Jablonowski, PhD*

Depending on which Vaccines they received, **Vaccinated children were between 29% to 74% more likely to Die, than unvaccinated children. Overall, children who received all 6 Vaccines recommended for 2-month-olds were 68% more likely to Die in their 3rd month of life, the data showed."** - in "'Deeply Troubling': Higher Mortality Rates Detected in Vaccinated 3-Month-Olds Compared With Unvaccinated Infants", The Defender, CHD, 23 December 2025.

Don't Leave It To The Doctor

"Shall we begin by taking it as a General Principle that: All Disease Is More or Less an Effort of Nature to Remedy a Process of Poisoning or of Decay, which has taken place weeks, months, sometimes years beforehand, unnoticed?

In watching disease the thing which strikes the experienced observer most forcibly is that: the symptoms or sufferings are very often not symptoms of the disease at all, but of something quite different; of the want of:

1. **Fresh Air.**
2. **Light.**
3. **Warmth.**
4. **Quiet.**
5. **Cleanliness.**
6. **Punctuality and Care in the administration of Diet;**
7. **Of each or of all of these.**

Disease is simply a Reparative Process which Nature has instituted."- Florence Nightingale, in "The Art of Nursing", 1946.

> ***"Whatever you need in life will control you; and if you think you need your pills, you will be controlled by the Pharmaceutical Companies, and the people that control them."***
> *- Kerwin Rae, Australia.*

The More Vaccines: The Higher Infant Mortality Rates

> *"In 2011, we published a study that found a positive correlation, demonstrating that among the most highly developed nations, those that require More Vaccines for their infants tend to have Higher Infant Mortality Rates." - Neil Z Miller, Medical Research, Institute of Medical and Scientific Inquiry, Santa Fe, USA, in "Reaffirming a Positive Correlation Between Number of Vaccine Doses and Infant Mortality Rates: A Response to Critics", Cureus, 2 February 2023.*

Many Infant Deaths Occur Within 7 Days of Vaccine

Elsevier's Toxicology Reports in April removed the Article "Vaccines and Sudden Infant Death: An analysis of the VAERS database 1990–2019 and review of the medical literature", Toxicol Reports, 24 June 2021, by Neil Z. Miller, a Medical Research Journalist, Director of the Thinktwice Global Vaccine Institute. Who has devoted 25 Years Educating Parents and Health Practitioners about Vaccines; Researcher in Institute of Medical and Scientific Inquiry. The paper examined more than 2,000 Infant Deaths Reported to the Vaccine Adverse Event Reporting System (VAERS), found that Many Occurred Within 7 Days of Receiving a Vaccine.

"Of 2605 infant deaths reported to The Vaccine Adverse Event Reporting System (VAERS) from 1990 through 2019, 58 % clustered within 3 days post-Vaccination, and 78.3 % occurred within 7 days post-vaccination, confirming that infant deaths tend to occur in temporal Proximity to Vaccine Administration. In 2019, Japanese scientists (Osawa) investigated autopsy reports associated with sudden deaths in previously Vaccinated Children. 3 of the children (2 infants and a 14-month-old child) died within 3 days post-Vaccination. Here are summaries of the infant reports:

Case 1 - "A 3 month old baby developed cold symptoms on the day after receiving Vaccines for Hib, pneumococcus, and rotavirus. One week earlier, the baby had also received Vaccines for diphtheria, pertussis, tetanus, and polio. The infant was found limp in the evening and transported by ambulance to the hospital. The infant had shallow breathing upon arrival but she Died after 12 hours."

Case 2 - "A 3 month old baby received 8 Vaccines concurrently, for Hib, pneumococcus, hepatitis B, rotavirus, diphtheria, tetanus, pertussis, and polio. The infant exhibited cold-like symptoms continuously from the day of Vaccination. He was Found Dead in the early morning of the 3rd day."

7 Studies, and 2 Confidential Reports that were discussed in this paper — CDC 1980, Torch 1982, Baraff 1983, Torch 1986, Soldatenkova 2007, GSK 2011, GSK 2015, Miller 2021 (All Mortality), and Miller 2021 (Sudden Infant Death Syndrome); confirm that sudden infant deaths in Vaccinated babies tend to cluster in the early post-Vaccination period, Suggestive of a Causal Association. They all found that substantial proportions of infant deaths occurred within 1 day, 3 days, 7 days post-Vaccination; 6 of the papers had a close concordance regarding proportions of Infant Deaths that occurred within 7 days post-Vaccination. 3 Studies found lower (but still substantial) percentages of infant Deaths within 7 days post-Vaccination. In these latter 3 studies, a greater percentage of the remaining Deaths Occurred after the first week post-Vaccination. Cascading Physiological events appear to peak on Day 2 post-Vaccination when the greatest number of Infant Deaths, and Sudden Infant Death Syndrome cases are reported.

Miller testified that there is:

> *"An Elevated risk for Sudden Infant Death Syndrome within the first 48 hours following immunization."*

Foreign antigens, like those in Vaccines, activate the production of cytokines "within hours" and peak "within 2 to at most 4 days" the period when a vulnerable infant who receives Vaccines is most likely to suffer a fatal event, if one is to occur. Kashiwagi (2014) confirmed that a child will have elevated cytokine levels in the blood 24–48 hours post-Vaccination. The increased number of reported infant deaths on the day after Vaccination as compared to the day of Vaccination (760 versus 440), and the decreased number of reported infant deaths on Day 3 post-Vaccination as compared to Day 2 (312 versus 760), are statistically significant. Similarly, the increased number of reported Sudden Infant Death Syndrome cases on the day after Vaccination as compared to the day of Vaccination (277 versus 131), and the decreased number of reported Sudden Infant Death Syndrome cases on Day 3 post-Vaccination as compared to Day 2 (126 versus 277), are also statistically significant. This study found that a substantial proportion of Infant Deaths, and Sudden Infant Death Syndrome cases Occurred in Temporal Proximity to Vaccine Administration. The excess of deaths during these early post-Vaccination periods was statistically significant." - in "Vaccines and Sudden Infant Death: An analysis of the VAERS database 1990–2019 and review of the medical literature", Toxicology Reports, 24 June 2021.

Vaccination Associated With Increase of Disease

"The aim to Compare the Health of Vaccinated Versus Unvaccinated pediatric populations. Using data from 3 Medical Practices in the United States with children born between November 2005 and June 2015, Vaccinated Children were

Compared to Unvaccinated Children during the first year of life for later incidence of: Developmental Delays; Asthma; Ear Infections; Gastrointestinal Disorders.

Vaccination before 1 Year of Age Was Associated with Increased Odds of:

1. Developmental Delays.
2. Asthma
3. Ear Infections.

In a quartile analysis, subjects were grouped by number of Vaccine doses received in the 1st year of life. Higher Odds Ratios were observed in Quartiles 3 and 4 (where More Vaccine doses were received) for all 4 health conditions considered, as compared to Quartile 1. In a temporal analysis, developmental delays Showed A Linear Increase as the age cut-offs increased from 6 to 12 to 18 to 24 months of age (Odds Ratios = 1.95, 2.18, 2.92 and 3.51, respectively).

Slightly Higher Odds Ratios were also observed for all 4 health conditions when time permitted for a diagnosis was extended from greater than 3 years of age to greater than 5 years of age. The Institute of Medicine (2001) Immunization Safety Review Committee conducted an evaluation regarding thimerosal-containing Vaccines and concluded that "the hypothesis that exposure to thimerosal-containing vaccines could be associated with neurodevelopment disorders" was biologically plausible.

Relationship Between Vaccination, Learning Disability And Neurodevelopmental Disorders

Mawson (2017) Found A Relationship Between Vaccination Status, and Learning Disability and Neurodevelopmental Disorders. Delong (2011) also reported a Significant Relationship to Neurodevelopmental Disorders (Autism, Speech and Language Delay) when looking at the proportions of Vaccine uptake in US children. Other research, focused more on the uptake of specific Vaccines, has elucidated such relationships. **Gallagher and Goodman (2008) saw a greater number of boys receiving special Education services if they had received the entire hepatitis B Vaccine series in infancy.**

Geier (2014; 2017) also documented a Link Between Neurodevelopmental Disorders and thimerosal-containing Vaccines. Mawson (2017) reported a significant Relationship Between Vaccination status and Ear Infections.

Wilson (2014) found that top reasons for emergency room visits and/or hospital admissions after their 12-month Vaccinations included:

1. Ear Infections.
2. Non-infective Gastroenteritis or Colitis." - in "Analysis of health outcomes in vaccinated and unvaccinated children: Developmental Delays, Asthma, Ear Infections and Gastrointestinal Disorders", SAGE Open Med., 27 May 2020.

Vaxelis: 6 In 1 Vaccine For Children

"VAXELIS is a Vaccine for: Diphtheria, Tetanus, Pertussis, Poliomyelitis, Hepatitis B, and invasive disease due to Haemophilus influenzae (H. influenzae) type b. **VAXELIS is approved for use as a 3-dose series in Children 6 Weeks through 4 Years of Age.**

Management of Acute Allergic Reactions

Epinephrine Hydrochloride Solution (1:1,000), and other appropriate agents and **Equipment Must Be Available For Immediate Use in case an Anaphylactic or Acute Hypersensitivity Reaction occurs.**

Guillain-Barré Syndrome And Brachial Neuritis

A review by the Institute of Medicine Found Evidence for a Causal Relation Between Tetanus Toxoid and both Brachial Neuritis and Guillain-Barré Syndrome. If Guillain-Barré Syndrome occurred within 6 weeks of receipt of a prior Vaccine containing tetanus toxoid, The Risk for Guillain-Barré Syndrome May Be Increased Following VAXELIS.

Ingredients

Each 0.5 mL dose contains 319 mcg **Aluminum from Aluminum Salts,** Polysorbate 80, Glutaraldehyde, Formaldehyde, Bovine Serum Albumin, Neomycin, Streptomycin, Polymyxin B, Ammonium Thiocyanate, Yeast Protein, and Water.

Carcinogenesis, Mutagenesis, Impairment of Fertility

VAXELIS has Not Been Evaluated for Carcinogenic or Mutagenic Potential or Impairment of Fertility." - in "Package Insert – VAXELIS", R3-0126, FDA, 23 October 2020.

> *"Adverse events leading to study Vaccine discontinuation were reported by 8 subjects (0.2%) in the PR5I group and 1 (0.1%) in the Control group.* ***Death was reported for 6 subjects (0.2%) in the PR5I group and 1 subject (0.1%) in the Control group. No deaths were considered by investigators*** *or this clinical reviewer to be related to the study Vaccinations." - in "Clinical Review – VAXELIS", FDA, 15 January 2019.*

> ***"In 13 cases (11.8%) the death occurred in temporal association with administration of the Hexavalent Vaccine (1 to 7 days). The Hypoplasia of the [Medullary] Arcuate Nucleus was present in 5 cases. In one case in particular an acquired hyperacute encephalitis of the tractus solitarii nucleus was diagnosed in the Brainstem."*** *- in* ***"Sudden Infant Death Following Hexavalent Vaccination",*** *Current Medicinal Chemistry, 2014.*

Ultrasound Damage Cells and Interfere With Fetus Development

“A Government Study (Fetal Effects of Ultrasound: A Growing Controversy”, Journal of Nurse Midwifery, Vol. 29, No. 4 July/August 1984), does indicate that: T**he Unborn Exposed to Ultrasound weigh less at birth.** That's a significant signal. Experts say that **Ultrasound Interfere with Normal Development.** The main researcher who triggered concern about Ultrasound, Dr Doreen Liebeskind, MD, Radiologist, Albert Einstein College of Medicine. **Exposes animal and human cells to Ultrasound Waves, found Abnormal Changes in the way the cells look and behave.**

After Ultrasound 100% Cells Become Phonetic & Distorted

The changes look the same as damage caused to cells by 29 rads of ionizing radiation, or X-Rays. That's the equivalent of about 250 chest X-Rays. Here's how normal cells look without Ultrasound, growing apart from each other in neat rows. Here's how they look after Ultrasound. A tangled mass growing wildly all over each other. Here are other normal cells in motion with smooth edges moving in a clear direction. After Ultrasound 100% of the Cells Become Phonetic and Distorted.” - Dr Doreen Liebeskind, MD, reveals shocking footage of aberrant cells post ultrasound, in “Fetal Effects of Ultrasound”, CNN, 1982.

The Risks of Ultrasound

“There is a growing concern among consumers and health care providers that the immediate benefits of diagnostic ultrasound used in obstetrics; may not outweigh the Potential Risks. Increasing concern has arisen regarding the fetal safety of widely used Diagnostic Ultrasound in obstetrics.

Animal studies have been reported to reveal:

1. **Delayed Neuromuscular Development.**
2. **Altered Emotional Behaviour.**
3. **Electroencephalogram Changes.**
4. **Anomalies.**
5. **Decreased Survival.**
6. **Genetic alterations have also been demonstrated in in vitro systems.**

David Banta, Assistant Director, Office of Technology Assessment, Congress of the United States, and Stephen K. Thacker, epidemiologist, Centers for Disease Control (CDC), **Found No Improvement In Infant Outcome Resulting From Electronic or Ultrasonic Fetal Monitoring.**

Yet, we find health professionals bringing increased pressure to bear on pregnant women to accept sonography as an integral part of prenatal care.

It will be 20 to 30 years before we will know whether ultrasound will be the Diethylstilbestrol (a synthetic, highly potent estrogen prescribed from the 1940s to 1970s to prevent pregnancy complications) of the next generation.

The implications of premature ovulation after ovarian Ultrasonography, reported in "Premature ovulation after ovarian ultrasonography", British Journal of Obstetrics and Gynaecology, 1982; are disturbing. If ultrasound can affect the adult ovary, what, then, is the effect of Ultrasound on the ova of the female fetus? Preliminary data from the United Kingdom suggests a higher incidence of Leukemia is found in children exposed to diagnostic Ultrasound. In vitro research by radiologists Liebeskind and Bases highlights the potential of Ultrasound to Adversely Affect the offspring. On CNN, Dr Liebeskind points out that in in vitro studies, exposure of cells to diagnostic levels of Ultrasound Causes Alterations in Cellular Growth and Motility." - in "Fetal Effects of Ultrasound: A growing controversy", Journal of Nurse-Midwifery, July 1984.

Ultrasound Should Not Be Used Routinely

"The persistence of abnormal behaviour, and motility in cells exposed to a single dose of diagnostic level ultrasound 10 generations after insonation suggests permanent hereditary effects. One can speculate that if fetal cells were to be subtly damaged, the effects might not become apparent until the next generation. The FDA warned that ultrasound should not be used routinely, and should be reserved for cases where essential diagnostic information cannot be gained by other means. In 1990, researchers from Helsinki (Saari-Kemppainen et al) randomly divided women into 2 groups, which did or did not have routine early ultrasound scans, **there were 20 miscarriages after 16-20 weeks in the screened group, and Zero (0) in the controls. In 1992, a report of a randomised controlled trial of doppler Ultrasound of 2,600 women at Queen Charlotte's Hospital (Davies, 1992) revealed that there were 4 times as many Perinatal Deaths (4:16) in the doppler group and almost 3 times as many stillbirths (4:11) compared with the group which Did Not Have doppler Ultrasound. A study in Helsinki (Taskinen, 1990) found that if the physiotherapist was pregnant and handling ultrasound equipment for at least 20 hours per week there was a significant Increase in the Risk of Spontaneous Abortion.** When I was presenting The Pulse, Channel 4 TV programme on Ultrasound, we filmed a group of pregnant women. **In the discussions with those women afterwards, one of them told me that she had 7 scans in her previous pregnancy because her baby had a "kidney problem." When I asked her what happened, she said: "They scanned my baby at 40 weeks and told me that the kidney problem was now OK."** What they had not told her was that there was nothing they could do about the kidney problem until the baby was born. She had undergone a whole series of **totally unnecessary ultrasound examinations.** The irony is that with her current pregnancy she rushed off to her doctor at 10 weeks, and has already had 5 scans", just to check that this baby is OK, and, so far, it is."

No-one had told her about the possible risks of ultrasound or what the implications may be." - Beverley A. Lawrence Beech, in "Ultrasound the Mythology of a Safe and Painless Technology", Royal Society of Medicine, 3 October 1995.

Further studies show that: **Ultrasound Examinations in the womb cause Destruction of Myelin, Maldevelopment of Neurons, Influence the Formation of Synapses in the Brain of the unborn child, and result in a 22% Reduction in the Cell Division Rate.** The head of the New York Albert Einstein College of Medicine, Robert Bases, states that there are hundreds of scientific publications since 1950, which testify that **Ultrasound has strong Negative Influences on Living Systems.**

The Assault On Female Biology

"1 in 4 Women taking Hormonal Contraceptives, is Prescribed Antidepressants. Women on the Birth Control Pill Face Double the Risk of Suicide Attempts, and Triple the Risk of Completed Suicide compared to those who never used hormonal contraception. By 1979, the U.S. Department of Health was distributing questionnaires asking children about their masturbation habits and sexual activities; not to gather health data.

The Pill works by tricking the body into believing it's already pregnant, flooding it with synthetic hormones that shut down natural ovulation.

Women who Use Oral Contraceptives have a 24% Increased Risk of Breast Cancer while taking them. How many teenage girls prescribed the Pill for Acne are informed they're potentially trading Clear Skin for Increased Cancer Risk?

Beyond the Pill itself lies a broader chemical assault on women's fertility. We live in an "Endocrine-Disrupting Soup"; surrounded by chemicals that interfere with our Hormonal Systems. Bisphenol A (BPA), a chemical used to make polycarbonate plastics and epoxy resins in plastics; mimics estrogen in the body.

Phthalates in personal care products disrupt hormone production.

Pesticides like atrazine feminize male frogs, and may be having similar effects on humans. Fluoride (which is not the actual natural Fluoride but a byproduct of industry) in drinking water affects Thyroid function, which is crucial for fertility. The Birth Control Pill Adds Another Layer to this Toxic Burden. Women who've been on the Pill since their teens, living in urban environments full of Endocrine Disruptors, eating processed foods wrapped in plastic, may find their bodies unable to conceive when they finally try.

Even more troubling is evidence that these chemicals may be Damaging the Maternal Instinct Itself.

The complex hormonal cascade that creates the drive to nurture and protect offspring can be Disrupted by Endocrine-Interfering Chemicals.

Oxytocin, the bonding hormone; prolactin, which promotes nurturing behaviours; the intricate dance of estrogen and progesterone that prepares a

woman's body and mind for motherhood; all can be affected by Chemical Exposure.

We may be creating a generation of women whose bodies are not only less capable of bearing children but whose brains are less primed to want them in the first place." - in **"The Birth Control Deception: What 60 Years of Lies Cost Women"**, Lies are Unbekoming, 27 July 2025.

The Decidedly Harmful Effects Exerted by Bromides as Presented in the Condition "Bromism"

"In 1857, Sieveking, in a paper read before the "Medical and Chirurgical Society" of London, advocated the Bromide of Potassium in Epilepsy, and since then his treatment has been faithfully followed, and imitated with a submissiveness truly marvellous. The practitioner of today makes the diagnosis of Epilepsy, prescribes Bromides, complacently contemplates his work, and then rests in the assurance that he has done his duty, "Secundum Artem", according to the practice. **The treatment of Epilepsy conducted on the conventional lines now universally accepted by the profession has been abandoned in the Buffalo State Hospital, and with results so highly satisfactory that we now regard the Bromide treatment as unnecessarily severe. Personally I observe the exhibition of the Drug with Feelings Akin to Distress, and believe it is not only Lacking in Therapeutic Virtue, but consider it in some respects Decidedly Harmful.**

It is prone to Irritate the Stomach, there by Developing Disturbance of the Digestive and Nutritive Functions, the very complication that the physician should avoid in the Treatment of Epilepsy; for upon a good digestion hinge the patient's chances of passing into a comfortable condition. Further, the Decidedly Harmful Effects Exerted by the Bromides as Presented in the Condition "Bromism", are so familiar to all that further comment on this subject is unnecessary. Touching cursorily on the employment of Drugs in the Treatment of Epilepsy, I would speak again briefly upon the use of Bromides.

Clinically it is certainly demonstrated that the Bromides exert a controlling influence over Epileptic Seizures, but **that influence is Merely Temporary, and continues Only During the exhibition of Large Doses. Eventually, notwithstanding the first and apparently encouraging results of treatment, The Disease Advances, The Seizures Increase In Frequency, And In Severity, And Dementia Becomes More Pronounced. Added to this, we find a poor physical condition which has gradually developed from the slow poisoning of the system. In fact there are now 2 conditions to contend with: Epilepsy, which Has Not Been Controlled; and Bromism, which has Developed as a Result of Treating the Former Disease. The Harmful Effects Resulting from the long continued Use of the Bromides in Epilepsy, More Than Counterbalance the Apparent Benefits."** - Dr Percy Bryant, MD, Medical Superintendent, Manhattan State Hospital, in The State Hospitals Bulletin, October 1896.

> ***"Bromides of course act by depressing the excitability of the Cortico-Motor Centers, and this Depressant Action Can Terminate in Paralysis (Bromism). Bromism is produced by cumulative action while as a rule the halogen compounds are rapidly eliminated by the kidneys, the Bromides Constitute a Marked Exception, and the author's researches have shown that a Large Amount of These Salts, Are Retained in the Tissues."*** *- Dr Landenheimer, MD, in "Ueber einige neuere Arzneimittel und Methoden zur Epilepsie Behandlung", (On New Remedies and Methods in the Treatment of Epilepsy), Die Therapie der Gegenwdrt, July, 1900.*

> ***"Most of the older physicians are well aware of Bromide Intoxication. Younger physicians, are not as conscious to the danger of Toxicity and need to be constantly aware of the possible Dangers of Bromide-containing preparations. In addition to the Bromides used and prescribed by physicians, an ever-constant menace is "over the counter" Patent Medicine used for sedation. Prompt recognition of Toxicity can often times prevent the development of serious Mental Derangement. Many Obscure Mental Cases may not be recognized unless the examiner, has the possibility of Intoxication by Bromides in mind. The usual cause of Death in Bromism is Pneumonia."*** *- in "The Existing Danger of Bromide Intoxication", Virginia Medical Monthly, August 1956.*

> ***"The Adverse Effects of Bromides Are Significant And Potentially Life Threatening. The most commonly seen problems involve the Central Nervous System, the Skin, and the Gastrointestinal Tract."*** *- in "Use and monitoring of Bromides in Epilepsy Treatment", Pediatric Neurology, August 1999.*

Bromide of Potassium to "Treat" Epilepsy

"Bromide is a type of Medication used to Treat Severe Epilepsy, particularly causing myoclonic seizures. **Bromide comes in 2 formulations: triple Bromide (contains 3 different variations of Bromide: Ammonium Bromide, Potassium Bromide and Sodium Bromide) and Potassium Bromide. The precise way it works to help Epilepsy Is Unclear but it has been used safely for over 150 years. This page from Great Ormond Street Hospital explains about Bromide, how it is given and some of its possible Side Effects. Bromide is taken by mouth, usually once a day. It is available in 2 formats: an elixir (liquid) and tablets. Undiluted squash will mask a lot of the taste but some Children will still be unable to cope with it. To give the elixir: Pour a small volume of undiluted squash into a glass. Bromide is also available as potassium bromide 850mg tablets. These are not available in the UK so have to be imported from abroad. Currently, GOSH is importing the tablets from Germany."** - in **"Bromide for Epilepsy", Great Ormond Street Hospital for Children, NHS Foundation Trust, June 2020.**

Don’t Believe The Medical Trade

“- What? Into consideration? **They’re Swindlers! They’ll Ruin him!**
And the Doctor, Why did that woman call in the Doctor?”

“As an expert. They want to establish that my brother is crazy, and killed in a fit of madness, not knowing what he was doing”, Alyosha smiled quietly, “only my brother won’t agree to it.”

“They Are Scum, Doctors and the Whole Medical Filth, Speaking in General, And of Course, In Detail. I Reject Medicine. It's a Useless Establishment.”

“For the Recovery of My Object’s Ailing Little Foot, a nimble fellow!
Ah, what a charming little foot,
But what a swelling has come to ‘t!
Tho’ Doctors visit, bringing balm,
***They Only Seem To Do It Harm.”** - Alexander Sergeyevich Pushkin*

“Ilyusha is very bad, he will certainly die.”
“Really? You Must Agree, that Medicine Is Vile.”
“What do you think the Doctor will say to him? I Can’t Stand Medicine!”
“Ilyusha will die. That seems certain to me now”, Alyosha replied sadly.
“Swindlers! Medicine Is A Swindle!”
“Science Lies, They Say, Science Makes Mistakes, The Doctors Were Unable to Distinguish Truth from Pretence.”

“My thanks also to the defense attorney, I wept listening to him, but it is not true that I killed my father, there was no need even to suppose it! And Don’t Believe The Doctors, I’m Entirely In My Right Mind.”

“How philosophize, when my whole right side was numb, and I was moaning and groaning.
I Called On The Entire Medical Profession: They Diagnose Beautifully, they tell you all that’s wrong with you one, two, three! But They Can’t Cure You.
There happened to be one enthusiastic little student: even if you die, he said, at least you’ll have a thorough knowledge of what disease you died of!
Then, too, They have this way of sending you to Specialists: we will give you our Diagnosis, they say, then go to such and such a Specialist, and he will cure you. I tell you, the old-fashioned Doctor who treated all diseases has completely disappeared, now there are only Specialists, and They advertise all the time in the newspapers. If your nose hurts, they send you to Paris: there’s a European Specialist there, he treats noses.

You go to Paris, he examines your nose: I can treat only your right nostril, he says, I don't treat left nostrils, it's not my Specialty, but after me, go to Vienna, there's a separate Specialist there, who will finish treating your left nostril. What is one to do?

I Resorted to Folk Remedies, one German Doctor advised me to take a Steam Bath, and Rub myself with Salt. I did it. I wrote to Count Mattei in Milan; he sent me a book and some drops, God help him. And imagine, what cured me was Hoff 's extract of malt! I accidentally bought some, drank a glass and a half, and could even have danced — everything went away." - Fyodor Dostoevsky, in "The Brothers Karamazov", 1880 (Harold Bloom, Ed. 1988).

Nursing Proper Means

"Nursing Proper Means:

1. The prodding, and the proper use of, fresh air, especially at night, that is: ventilation, and of warmth or coolness.

2. The securing the health of the sick-room or ward, which includes light, cleanliness of floors and walls, of bed, bedding, and utensils.

3. Personal cleanliness of patient and of nurse, quiet, variety, sympathy, and cheerfulness.

4. The administering and sometimes preparation of diet (food and drink).

5. The application of remedies. In other words, all that is wanted to enable Nature to set up her restorative processes, to expel the intruder disturbing her rules of health and life.

For it is Nature that Cures: Not the Physician or Nurse.

Light - Second only to air, is light as an essential for growth, health, and recovery from sickness (not only daylight, but Sunlight), and indeed Fresh Air must be Sun-warmed, Sun-penetrated Air.

This should be meant to include Colour, pleasant and Pretty sights for the patient's eyes to rest on; variety of Objects, Flowers, Pictures.

People say the effect is on the mind.

So it is, but the enlightened physician tells us it is on the body too.

The sun is a sculptor as well as a painter.

Cleanliness - Cleanliness and Fresh Air do not so much give life, as They Are Life Itself To The Patient.

Cleanliness: Clean Air, Clean Water, Clean Surroundings, and a fresh atmosphere everywhere, Are The True Safeguards Against "infection" (Not Segregation), or rather, Segregation by ample floor and cubic space, ample ramparts of fresh atmosphere: Not Segregation by Walls and Divisions.

You cannot lock-in or lock-out the infectious poison; you cannot wall-out infection.

You can air it out, diffuse it, and clean it away.

"Infectious Hospitals" and "Wards", whether necessary or not, are not a part of Hygiene; and the doctrine of "Disease Germs", in the sense in which it may lead to considering "infection" inevitable, Must Not Be Taught As A Principle of Sanitary Nursing. That there is no such thing as "inevitable" Infection, Is The First Axiom of Nursing.

Cleanliness of floors, ceilings, walls, bed, bedding, utensils, and of sinks; also of lockers, if any— but there should be none.

Floors & Walls - Medical Men Forbid Scrubbing in the Sick-Room." - Florence Nightingale, in "A Dictionary of Medicine; including General Pathology, General Therapeutics, Hygiene", 1894.

"Is it not living in a continual mistake to look upon diseases, as we do now as separate entities, which must exist, like cats and dogs?

Instead of Looking Upon Them as Conditions, like a dirty and a clean condition, and just as much under our own control; or rather as the reactions of kindly nature, against the conditions in which we have placed ourselves.

I was brought up, both by scientific men and ignorant women, distinctly to believe that Small-Pox, for instance, was a thing of which there was once a first specimen in the world, which went on propagating itself, in a perpetual chain of descent, just as much as that there was a first dog (or a first pair of dogs), and that Small-Pox would not begin itself any more than a new dog would begin without there having been a parent dog.

Since then, **I have seen with my eyes and smelt with my nose Small-Pox growing up in first specimens, either in close rooms or in overcrowded wards, where it Could Not By Any Possibility Have Been "Caught", but must have begun. Nay, more, I have seen diseases begin, grow up, and pass into one another. Now, dogs do not pass into cats. I have seen, for instance, with a little overcrowding, continued fever grow up; and with a little more, Typhoid Fever; and with a little more, Typhus, and all in the same ward or hut. Would it not be far better, truer, and more practical, if we looked upon disease in this light?**

For diseases, as all experience shows, are adjectives, not noun substantives.

Nursing Ought to Assist the Reparative Process

The Art of Nursing, as now practised, seems to be expressly constituted to unmake what God had made Disease To Be: A Reparative Process.

To recur to the first objection. If we are asked: Is such or such a disease, a reparative process? Can such an illness be unaccompanied with suffering?

Will any care prevent such a patient from suffering this or that?

When you have done away with all that pain and suffering, which in patients are the symptoms not of their disease, but of the absence of one or all of the above-mentioned essentials to the success of Nature's reparative processes, we

shall then know what are the symptoms of and the sufferings inseparable from the disease. The commonest exclamation which will be instantly made is: Would you do nothing, then, in cholera, fever, etc.? So deep-rooted and universal is the conviction that to give medicine is to be doing something, or rather everything; To Give Air, Warmth, Cleanliness, Etc., is to do nothing. The reply is, that in these, and many other similar diseases the exact value of particular remedies, and modes of treatment is by no means ascertained, while There Is Universal Experience as to the Extreme Importance of Careful Nursing in Determining the Issue of the Disease." - Florence Nightingale, in "Notes on Nursing: what it is, and what it is not", 1860.

Florence Nightingale on Disease

"Under the influence of her simple common sense, diseases assumed a milder form, contagions lost their terror, wounds took on a healthy condition, and pestilence was nearly exterminated from the camps and hospitals.

Uneducated in the falsities of the prevalent medical system, her mind was free and unprejudiced. She could see with her own eyes, and read the Book of Nature intelligently. She studied the Nature of disease from the standpoint of common sense, instead of that of the dogmas of the dark ages, and hence could hardly fail to comprehend its true nature.

Her remedies were: Fresh Air, Pure Water, Rest, Light, and Simple Food.

No wonder her success put to shame the Bleeding, Blistering, Calomel (Mercury), of the graduates of the Medical Colleges. She has written a work entitled "Notes on Nursing", which contains more sense respecting the essential nature of disease, than can be found in all the works of the Medical Profession on this subject." - in "Health Reformer", Battle Creek, December 1869.

> ***"Experience has proven that those who have previously studied medicine, and afterwards tried to add Osteopathy, have been but a hindrance to the science.***
>
> ***An allegiance to drugs once established, is almost impossible to overcome.***
>
> ***After careful consideration, therefore, it has been established that as a general rule no person shall be admitted as a student who has previously studied and practiced medicine. It is desired to make successful operators of all who enter the school, and results have shown: The Non-Medical Student Far Surpasses those who have studied medicine."*** *- in "Journal of Osteopathy", Vol.1, No.1, May 1894.*

> ***"Pharmaceutical Companies are Not Charitable Institutions. They are in Business to Make Money–Profits!"*** *- Dr Elizabeth M. Whelan, president of the American Council on Science and Health, in "The Drug-Importation Hoax", National Review, 16 January 2005.*

The Medical Trade Death Cult

"For All Benzodiazepines.

Medicines and Healthcare products Regulatory Agency / Commission on Human Medicines (advice: Benzodiazepines and opioids: reminder of risk of Potentially Fatal Respiratory Depression (March 2020).

The MHRA reminds healthcare professionals that Benzodiazepines and Benzodiazepine-like Drugs co-prescribed with Opioids can produce additive CNS depressant effects, thereby increasing the risk of sedation, Respiratory Depression, Coma, and Death." - in "National Institute for Health and Care Excellence", **19 March 2020.**

Now lets look at the following; Bearing In Mind The Fact That "Viruses" Don't Exist.

> ***"It is worth noting that while the Case Rate has been Going Down. The Death Rate has actually been Going Up.*** *By the time you read this it is very probable that as many as 1 Million Americans will have died. This despite the fact that the U.S. "Spends $10,586 per person, per year on Healthcare. Norway spends $6,187, and Netherlands spends $5,288." - in "Covid, and the Rise of an American Death Cult", Explore, May 2022.*

The Medical Trade Moral Decay, and Total Disregard for Human and Animal Life.

"Table 4 End-of-life treatments for managing breathlessness for patients aged 18 years and over: Add a Benzodiazepine if required

For breathlessness and anxiety: **Lorazepam** 0.5 mg sublingually when required (maximum 4 mg daily). Reduce the dose to 0.25 mg to 0.5 mg in elderly or debilitated patients (maximum 2 mg in 24 hours) **For associated agitation or distress: Midazolam 2.5 mg to 5 mg subcutaneously** when required (see BNF for more details on dosages) **Sedation and opioid use should not be withheld because of a fear of causing respiratory depression."** - in "COVID-19 rapid guideline: **managing symptoms (including at the end of life) in the community",** NICE (UK) guideline, 3 April 2020.

Midazolam / Benzodiazepine Side Effects

> ***"Midazolam Injection May Cause Serious or Life-Threatening Breathing Problems such as: Shallow, slowed, or temporarily stopped breathing that may lead to Permanent Brain Injury or Death."*** *- in "Midazolam Injection", National Library of Medicine, Medlineplus.gov, 15 April 2017.*

Common Side Effects:

1. Anxiety
2. Depression
3. Drowsiness or Sleepiness
4. Dizziness
5. Headache
6. Nausea
7. Confusion
8. Muscle Weakness
9. Tremor
10. Ataxia, such as:
    a. Balance and walking
    b. Speaking
    b. Swallowing
    c. Motor Skills, such as writing and eating
    d. Vision

Increased Risk of Falls, and associated Fractures if you're elderly and use Benzodiazepines.

Less Common Side Effects:

1. Agitation
2. Abnormal Behaviour
3. Skin Reactions
4. Memory Loss
5. Hallucinations
6. Aggression

Lorazepam Side Effects

Similar to most Benzodiazepines, Lorazepam can induce Adverse Reactions such as Central Nervous System and Respiratory Depression.

Common Adverse Effects of Lorazepam:

1. Sedation
2. Dizziness
3. Asthenia
4. Ataxia
5. Local injection site reaction
6. Respiratory depression
7. Hypoventilation with IV use
8. Hypotension
9. Fatigue

10. Amnesia
11. Confusion
12. Disinhibition
13. Irritability
14. Libido changes
15. Menstrual irregularities
16. Diplopia
17. Dysarthria
18. Appetite changes
19. Constipation
20. Incontinence
21. Urinary retention
22. Dystonia
23. Aspartate aminotransferase (AST), and alanine aminotransferase (ALT) elevation
24. Lorazepam can cause Acute Liver Injury (cholestatic pattern).

Severe Adverse Side Effects of Lorazepam:

1. Respiratory Depression and Failure
2. Seizures
3. Suicidality
4. Dependency and Abuse
5. Tachycardia
6. Hypotension
7. Syncope
8. Blood Dyscrasias
9. Jaundice
10. Paradoxical Reaction (hyperactive and Aggressive Behaviour)
11. Gangrene (intra-arterial)
12. Withdrawal symptoms if abruptly discontinued after long-term use.
13. Cognitive Deficits
14. Behavioral Changes
15. Paradoxical Agitation
16. Propylene Glycol Toxicity (Hyponatremia and Metabolic Acidosis)

If You Don't Get Her Out of There She Will Be Dead In A Few Days

"The story my friend told me, about her mother, completely fitted the profile, I said:

> ***"If you don't get her out of there, or get her off that pathway, get those Drugs taken away, she will be Dead In A Few Days."***

Once a Syringe Driver is put onto somebody in that situation, and that's a Pump that Intermittently Administers Medications.

The Death Protocols

Once that's been put in place, it's an average of 29 Hours Before the Person Passes Away. Some people go quicker, sometimes it takes a lot longer.

Depends on the the individual.

In this case, I thought it's going to be maximum of 3 days.

She went into the Hospital, said she wanted her mother taken off it.

They they talked her out of it.

They talked her father out of it as well, who was very upset at the time and stressed. They take advantage of this situation, where the people just don't know what to do. Her mother Died within a couple of days, and then it got worse after that, if you can imagine.

When she got the phone call saying her mother had Died, she went to the Hospital, went into the room where her mother was.

Her mother had just been left dead with her eyes open, with her mouth open, the room in disarray, with the syringe driver still attached". - Jacqui Deevoy, in "Unseen: The Truth Behind Death Protocols", 20 July 2025.

> ***"Those who have had to take detailed notice of the Immunisation (Vaccines) Accidents of the past few years, know that to get the truth of what really went wrong generally calls for the resources of something like a secret service."*** *- in "The Lancet", 1 January 1938.*

> ***"The National Health Service helpline told John:***
> ***"Under no circumstances, to go outside the door. We were under lockdown."***
> ***They told John to:***
> ***"Go To Bed, Shut the Windows, and Shut the Curtains, and Self-Isolate."***
> ***John took this advice (UK lockdown measures legally come into force 25 March 2020).***
> ***John died, 5 May 2020."*** *- in "Unseen: The Truth Behind Death Protocols", 20 July 2025.*

You Are Going To End Up Dead: You Go In, You Don't Come Out Again

"- Are you aware the protocols at the time like the National Institute for Health and Care Excellence (NICE) guideline NG163?

- Yes, we are, my heart completely sank as soon as they used the word COVID, because I knew straight away what that would entail.

I know people that have worked on these wards, and they say things like: "You go in there, you don't come out again".

It Is A Death Sentence.

So you know whatever that protocol is, it's not making you better.

It's making you worse, and You Are Going To End Up Dead.

- Do you believe that your dad knew? Do you think he knew that he was being put on this Sort of Pathway to Death?

- If you think he did. I think that's why he was so scared. That's why he rang up saying: "Get me out of here now."

You know, and I feel guilty because I was like: "Dad, just calm down. You need to listen. They're there to look after you."

So, there's a level of guilt from my side because I should have listened to my dad. Why did I let them do that to him?

What were they saying to him? Why was he so agitated?

You know, because to start with he was he was okay.

He was managing and then it just seemed to spiral. But actually now I realise that there's so much more to the story. And I wasn't aware of that at the time.

It made us lose complete faith in the NHS and hospitals.

Recently our mom had to go into hospital, just before Christmas last year with some type of Flu. And the whole time "Do you want to do Covid Tests?", and you're like no, because you're scared that she's going to follow the same protocol. I spoke to someone last week, whose mom's just been killed in hospital. So, they're still doing it. It did seem to be a lot more prevalent in 2020.

- Since then you have met other people who have been through similar experiences. Many of them have gone to the police and just got nowhere.

- They know these things have come from higher levels, Protocol NG163, Matt Hancock's thing [UK Health Secretary]. So this this stuff comes from the top." - in **"Unseen: The Truth Behind Death Protocols"**, 20 July 2025.

Medical Trade Medication Cause Falls and Fractures

> ***Medical Trade Pharmaceuticals Medications Are A Major Cause of Falls, especially for older adults, due to side effects like: drowsiness, dizziness, and low blood pressure (orthostatic hypotension). Sedatives, Sleeping Pills, Antipsychotics, Antidepressants, and some Blood Pressure Medications. These Drugs can Impair Balance, slow reaction times, and cause sudden drops in blood pressure, all of which Increase Fall Risk.***

"A number of Medicines can Cause or Contribute to Falls and these are sometimes referred to as Falls Risk Increasing Drugs (FRIDs). This document highlights FRIDs and also highlights Medicines that Cause or Contribute to Fractures. Falls Can Be Caused by almost Any Drug that acts on the Brain, or on the Circulation.

Mechanism Leading To A Fall:

1. Sedation, with slowing of reaction times and impaired balance.

2. Hypotension, including the 3 Syndromes of Paroxysmal Hypotension – orthostatic hypotension, Vasovagal syndrome, and Vasodepressor carotid sinus hypersensitivity.

3. Bradycardia, Tachycardia, or periods of Asystole.

Falls may be the Consequence of recent Medication changes, Are Usually Caused By Medicines that have been given for some time. Anticholinergic Burden of Medication Also Increases Falls Risk. Some Medicines Also Increase the Risk of Fracture." in **"Medicines and Falls"**, NHS, July 2023.

Falls A Major Cause of Injury Related Deaths

> ***Falls are a Leading Cause of Injury and Death, particularly among older adults. While falls are a common occurrence, they can have serious consequences, Including Accidental Death.***

"Falls represent the Most Frequent Serious Type of Accident in People aged 65 and over. Every year, more than 1 in 3 (4 Million) people over 65, in UK suffer a Fall, that can cause Serious Injury and even Death. Falls Are The Main Cause of Disability, and the Leading Cause of Death, from Injury among people aged over 75 in UK. Public Health England guideline on "Falls: applying All Our Health", lists the following factors as the causes of having a fall: Polypharmacy and The Use of Certain Medicines." - in "Public Health Report: Falls and Fractures", London Borough of Harrow, 2019.

"Falls Are A Major Health Problem. Estimated 684,000 Fatal Falls occur each year, the Second Leading Cause of unintentional Injury Death, after road traffic injuries." *- in "Falls", World Health Organization, 26 April 2021.*

Medicines And Falls

"Falls Can Be Caused by Almost Any Drug that Acts on the Brain, or on the Circulation.

Usually the mechanism leading to a fall is one or more of:

1. Sedation, with slowing of reaction times and impaired balance.

2 Hypotension, including the 3 syndromes of paroxysmal hypotension – Orthostatic Hypotension, Vasovagal Syncope and Vasodepressor Carotid Sinus Hypersensitivity.

3. Bradycardia, tachycardia or periods of asystole." - in "Medicines and Falls in Hospital", John Radcliffe Hospital, Oxford, March 2011.

How The Medical Trade Poisons Individuals to Death Every Day

"In the last 30 years, You Can See Good Evidence that the National Health Service has become a Killing Machine." *- Dr Kevin Corbett, MSc PhD, ex-Registered Nurse, in* ***"Playing God: An Investigation into Medical Democide in the UK"****, 22 April 2024.*

"She was in no pain, yet she was on 6 or 7 forms of medication. The Hospital kept on introducing a new number or drugs she was not happy to take." *- in "Playing God: An Investigation into Medical Democide in the UK", 22 April 2024.*

"Medical Democide" - Death or Harm Caused by Government Policies or health care practices — appears widespread in the National Health Service (UK)." - Jane Apicella Longest, in "UK medical democide documentary exposes harmful NHS practices", Facebook, 23 June 2024.

"Dr Mason Good said: 'The effect of medicine on the human system is in the highest degree uncertain, except, indeed, that it has already destroyed more lives than war, pestilence and famine combined." *- Dr C. Spencer Kinney, MD, in "Auto-Intoxication, Overstrain, Exercise and Bathing", 1905.*

Diseases of Medical Progress

> ***"The Diagnosis and Treatment of Disease Involves Many Potential Hazards, among which are Intoxication; by and Adverse Reactions to Drugs. In 1959 Increasing Awareness of these Drug-Related Hazards led to the coining of a new term: "Diseases of Medical Progress"."*** *- in* ***"Drug Reactions and Errors in administration on a medical ward"****, Canada Medical Association Journal, 21 October 1967.*

Antibiotic-Induced Diseases

"Antibiotic-resistant **Staphylococci Are Transmitted in the Hospital Environment by cross-infection, auto-infection, carriers, bacteria laden air, dust, blankets and other fomites. Resistant strains are cultured more frequently from Hospitalized Patients receiving Antibiotics, than from those Not Receiving Such Therapy; the Incidence Increases With Length of Hospital Stay.**

Illnesses Produced by Drugs And Therapeutic Procedures

The Colonization of Resistant Staphylococci Is The Result of Suppression of the Normal Bacterial Flora, allowing the resistant organisms to multiply and spread. **An Increased Transmissibility of Staphylococci Has Been Demonstrated in Patients Receiving Antibiotics, believed to be Due to Drug-Induced Suppression of Normal Nasopharyngeal Flora."** - in "Diseases of Medical Progress: a contemporary analysis of **Illness Produced by Drugs And Other Therapeutic Procedures**", 1964.

Adverse Reactions:
The Menace of Medications

"Too many physicians have a Low Index of Suspicion:

> ***"Poor Documentation of Drug Reactions has Minimized the apparent Frequency of Drug Toxicity*** *in the United States. Reporting in the past has* ***relied on the volition of the physician or hospital staff; the quality of the data gathered is deplorable. A physician is naturally reluctant to think that his treatment contributes to a patient's disability.*** *Too frequently,* ***laboratory data of new symptoms that do not "fit" into the anticipated course of the disease are ignored."*** *- Dr Kenneth L. Melmon, MD, University of California, in "Preventable Drug Reactions — Causes and Cures", New England Journal of Medicine, 17 June 1971.*

The Hazards of Hospitalization

"For the 30 Million patients hospitalized annually, the risk of adverse drug reactions is especially great. They are relatively older than non-hospitalized patients, they are usually more seriously ill, and **they are Exposed to more Drugs during their Hospital stay.** It has been estimated that **of the patients admitted to the Medical Services of general Hospitals in the United States, each will receive an average of 8 or More Drugs during their Hospitalization. As many as 28% of them may suffer an Adverse Reaction.** Perhaps **3% to 5% of the patients in those Medical Services were admitted Because of Adverse Reactions ("Hazards of Modern Diagnosis and Therapy: The Price We Pay"**, JAMA, 10 December 1955).

If Admitted to the Hospital for any other reason than:

1. Heart Attack.
2. Fractured Leg.

A Patient Runs A Substantial Risk.

In one early epidemiological study conducted in 1960, Dr Elihu M. Schimmel, of Yale in **"The Hazards of Hospitalization"**, Annals of Internal Medicine, January 1964, found that of more than 1,000 patients admitted during an 8 month period, **13% developed Adverse Drug Reactions Caused by Diagnostic Procedures or Therapy.** At least 1% of all admitted patients in this study **Died Of An Apparent Drug Reaction.** In an important study undertaken by Dr Leighton Cluff and his colleagues at Johns Hopkins Hospital in 1964, it was disclosed that 13.6% of patients developed "documented" or "probable" **Adverse Drug Reactions during hospitalization.** About 5% of their patients had been hospitalized because of such a reaction, and of this group nearly 33% developed an additional drug reaction during hospitalization ("Studies on the Epidemiology of Adverse Drug Reactions, I. Methods of Surveillance", JAMA, 15 June 1964).

Died of Apparent Drug Reaction

> ***"A Report by a Senate subcommittee on the Use of Drugs in the nation's 23,000 nursing homes, released today, concluded that many elderly patients "May often Actually Suffer Setbacks In Physical well-being because of poor management, or Worse, of Prescription Drugs Given To Them." The systems for distributing or administering drugs to patients are generally "inefficient and ineffective", with the result that 20% to 40% "are administered in error", and There Is A "High Incidence" of Adverse Reactions."*** *- in "Misuse of Drugs Reported in Nation's Nursing Homes", The New York Times, 17 January 1975.*

Drug-Induced Diseases

Drug Reactions, they reported, rated 7th among all Causes for Hospital Admission. In one Canadian study a survey showed that **30% of Hospitalized patients either suffered an Adverse Drug Reaction or were Victims of an error in Drug administration** (B. C. Hoddinott, in "Drug Reactions and Errors in administration on a Medical Ward", Canada Medical Association Journal, 21 October 1967). In another, it was reported that 18% of all patients admitted to the public Medical Wards of Montreal General Hospital **Developed Adverse Reactions, most of which either were so serious as to require specific corrective therapy and Prolonged Hospitalization or Resulted in Death.** Nearly 7% of all entering patients had been admitted because of a Serious Drug Reaction.

> ***"If you Don't Look for an Adverse Drug Reaction, you Won't See it;*** *if you see it but Don't Report it, Nobody Can Count It; and if you're apprehensive about a possible Malpractice Suit, you may be tempted to Ignore The Whole Thing." - Dr Daniel Banes, Director Office of Pharmaceutical Research and Testing, Bureau of Drugs, Food and Drug Administration (FDA), in personal communication, 1972.*

Thus, Dr Cluff noted in his "Studies on the Epidemiology of Adverse Drug Reactions, V. Clinical Factors Influencing Susceptibility", Annals of Internal Medicine October 1966, that: **The Rate of these Reactions was 4.2% among Patients Receiving Fewer than 5 Drugs; but 45% In Patients Using 21 or More Drugs.** In 1 Drug reaction case, 52 different drugs were prescribed for the same patient: "Which, I think is a little hard to justify." In 1970 Dr Donald Brodie, of the National Center for Health Services Research and Development, stated that the annual costs of these reactions are in excess of $1 Billion. More recently, Dr Melmon noted that a Drug-Reaction patient would be hospitalized approximately twice as long as a comparable patient with the same disease but without a reaction.

> ***"All of us have seen too much serious illness from drugs for which the patient had no real need."*** *- in* ***"Disease Drugs Cause",*** *New England Journal of Medicine, 5 December 1968.*

The Patients At Risk

The explanation seems apparent: **The More Drugs Used, The Greater The Danger. The elderly, those aged 65 or more, are in a more hazardous state** than younger adults (Miller, "Drug Surveillance"). A Temple University study showed, **when kidney function is impaired, the rate at which a drug is excreted from the body may be slowed and dangerously high concentrations may be built up in the tissues** ("A Practical Guide to Drug Usage in Adult Patients with Impaired Renal Function", JAMA, 23 November 1970).

Drug absorption is usually more rapid in very young children, but **Drug metabolism and excretion may be slower than in adults.**

There may be significant differences in the rate at which Drugs pass from the blood into the brain.

A Drug that has no influence on the skeletal and sexual systems of an adult; **Can Have a Catastrophic Effect on the Developing skeletal system and sexual organs of a Child.**

Patients with Porphyria (an inborn error of metabolism), **may have acute attacks of the disease precipitated by the use of Barbiturates** (Depressant Drugs).

In recent years, particularly, concern has been expressed over the use of apparently **Benign Drugs** in pregnant women.

Malformation or Death of the unborn child **Has Been Associated** with the mother's use of such products as:

Barbiturates, Opiates, Anticoagulants, Sulfa-Drugs, Streptomycin, Antithyroid agents, some Antihistamines, and excessive quantities of Vitamin C, and Vitamin K.

> *"Unless a Drug is urgently needed, **it should not be administered during pregnancy, especially during the first trimester or close to the time of delivery."** - in "Drugs in Pregnancy", Medical Letter, 8 December 1972.*

Dr Edward Quilligan of the University of Southern California estimated that **90% of the Drugs now given pregnant women should probably not be used** except in cases of extreme urgency (meeting of California Medical Association, 13 March 1973). **A List of the Tissues, Organs, and Functions which Can be Damaged by Drug Reactions in these high-risk groups, would be a catalogue of Practically All the Parts and Functions of the Body; from Bones to Brain,** and from digestion to sex drives.

In recent years particular attention has been directed toward adverse drug reactions involving **The Skin, The Organ Which Is Often Held To Be A Mirror Reflecting Changes In Other Parts of the Body.**

The majority of patients, and apparently **Many Physicians, seem inclined to dismiss Adverse Drug Reactions involving the skin as irritating, uncomfortable, or at the worst temporarily disfiguring. There appears to be little realization that some of These Reactions May Lead To Death. These Include:**

1. **Allergic Urticaria Secondary to Anaphylaxis.**
2. **Stevens-Johnson Syndrome.**
3. **Lyell's Disease.**
4. **Exfoliative Dermatitis.**
5. **Allergic Vasculitis.**
6. **Drug-Induced Lupus Erythematosis.**

All Can Cause Death.

Any Drug that will influence living tissues, **can also Damage those Tissues.**

Most frequently implicated in Adverse Reactions resulting in Hospitalization are: Digoxin, Aspirin, Prednisone, Warfarin, and Guanethidine.

The Drugs most commonly Causing Adverse Reactions in Hospitalized patients were headed by: Heparin, Prednisone, Spironalactone, Hydrochlorothiazide, Digoxin, and Neomycin (Miller, "Drug Surveillance").

Many a physician prescribed a Drug on the comforting basis that:

"It may not do any good, but it won't hurt you."

Antibiotics

Well documented, but apparently unappreciated by many patients and physicians alike, **is the fact that No Antibiotic - no antibacterial substance of any kind - can be accepted as completely safe.** In "Diseases of Medical Progress", Dr Robert Moser has discussed the seemingly limitless complications that have followed 20 years of **"Antibiotic Abandon." They Have Caused Illnesses More Severe than the Diseases they were intended to combat.**

They have Directly Led to:

1. **Kidney.**
2. **Gastrointestinal.**
3. **Pulmonary.**
4. **Liver.**
5. **Nervous System.**

Destruction And to Disfiguring, Disabling, and sometimes Lethal Skin Reactions (Stevens-Johnson Syndrome). They Have Injured the bone marrow-here chloramphenicol is the most renowned offender, and have caused aplastic anemia, agranulocytosis, hemolytic anemia, and other blood dyscrasias, which sometimes are fatally irreversible. They have triggered serious anaphylactic or other allergic responses, including:

1. **Asthma.**
2. **Serum Sickness.**
3. **Skin Disorders.**

Often this application wipes out susceptible organisms and leaves the patient unprotected against infections by fungi or previously benign bacteria.

Bacterial mutations are encouraged, and the development of antibiotic-resistant strains is fostered. In combination with steroids, antibiotics can cause a proliferation of fungi which may produce a disseminated fatal infection.

It has been estimated that from 2% to 7% of hospitalized patients receiving antibiotics will develop a serious or even deadly superinfection ("Nosocomial Infections", Postgraduate Medicine, November 1971; "Untoward Effects of Antimicrobial Drugs", Postgraduate Medicine, November 1971).

Of special ecological importance, antibiotics can indirectly upset the balance of microorganisms. Dr James Philp has accordingly noted that antimicrobial agents are among the most dangerous environmental pollutants.

> ***"Unfortunately the Full Impact of This is Seldom Felt by the Prescribing Physician, who is not only a prime polluter but also is in a key position to minimize the dangers."*** *- Philp in "Untoward Effects", Postgraduate Medicine, 1971.*

The problem of safe Antibiotic Therapy and the proper approach to antibiotic prescribing have been well summarized by 2 eminent pharmacologists, Dr Louis Goodman, and Dr Alfred Gilman:

> ***"The fact that Harmful Effects may Follow the Therapeutic or Prophylactic Use of Antibiotics, must never discourage the physician from their administration in any situation in which they are definitely indicated. It should, however, make him very careful in their use when they are required, and very hesitant to employ them in instances in which indications for their application are either entirely lacking, or at most, only suggestive. To do otherwise is to run the risk, at times, of converting a simple, Benign, and self-limited disease Into One that May Be Serious or Even Fatal.***
> ***It must always be kept in mind that the use of any powerful therapeutic agent is accompanied by a calculated risk.***
> ***The Antibiotics are no different; to be concerned with only Their Potential Dangers is no less unrealistic, and unwise than to accept them as universally applicable, completely benign, and entirely harmless."*** *- in "The Pharmacologic Basis of Therapeutics", 1970.*

Psychoactive Drugs

The Prescribing of Psychoactive Drugs Is Not Without Hazard.

It may lead to the dangerous belief that one of these agents, not only will alleviate the symptoms for a brief period, but will actually solve the woes, griefs, and problems of everyday living. The attitudes surrounding the prescribing and use of these **Drugs can easily lead to a way of life based on the conviction that all personal, and interpersonal relations can be readily, and safely regulated by chemistry. Currently, about 17% of all prescriptions, 1 in 6, calls for a Psychoactive Drug.** They do not seem to call for medical help.

A prescription for a mood-altering Drug can provide relief for awhile, **but at a price that does not seem justifiable.**

That Drug Companies have participated in promotional campaigns to encourage the use of their products to solve common emotional problems may be understandable.

After all, as one Drug Promotion expert has indicated, **The Sale of Psychoactive Drugs Has Become Very Big Business Indeed."** - in **"Pills, Profits, and Politics"**, 1974.

> ***"I have so often witnessed the Injurious Effects wrought on patients by unwise dosing with strong Drugs, and by Needless Surgical Operations, I also have taken a stand against what I consider unthinking medical treatment. Drugs are prescribed, and Operations performed, sometimes without due regard to the true causes behind the patient's symptoms."*** *- Delord Kordel, SC.D, in "Health Through Nutrition", 1971.*

Drug Effects Blamed for 20% of Hospital Deaths Among Elderly

"Study has shown that Drug related Side Effects May Contribute To Nearly 20% of All Hospital Deaths in Elderly Patients.

Dr Just Ebbesen and his team found that The Cause of Death in 133 (18%) of the patients was classified as either an Indirect or Direct Fatal Reaction to the Drugs they were given. In (75 of the 133), 56% patients with Fatal Drug Reactions, Postmortem Findings; or Drug analysis data were decisive in Recognising the Drug's Role in the Patient's Demise. The More Drugs a patient Was Taking, The Higher the Risk of Fatal Side Effects." - in **"Drug Effects Blamed for Fifth of Hospital Deaths Among Elderly"**, British Medical Journal, 3 November 2001.

The Main Influences in Reduction of Diseases

"Examination of the diseases which contributed to the decline, suggested that; The Main Influences Were:

A. Rising Standards of Living, of which The Most Significant Feature Was A Better Diet;

B. Improvements in Hygiene;

C. A Favourable Trend in the Relationship Between some Micro-Organisms, and the Human Host.

Therapy Made No Contribution.

The heterogeneous class of deaths ascribed to prematurity, immaturity and other diseases of infancy made the largest contribution (9.1%) to the total decline in mortality. **These deaths were almost restricted to the first year of life**, and their reduction was the main reason for the rapid fall in infant mortality from the beginning of the century. **It Is Unlikely that Specific Treatment contributed much to this trend, which, like the decrease of infectious deaths in infancy, was probably Due Mainly to General Improvements in Infant Feeding and Care.**

Against the background of these considerations it is probably not possible to take the interpretation of the decline of non-infectious deaths in this century beyond the general statement that it undoubtedly owed a good deal to specific medical measures, but **was also influenced considerably by general improvements in standards of living, particularly in respect of infant feeding and care."** - in "An interpretation of the decline of mortality in England and Wales during the 20th century", United Nations Publications, November 1975.

The Problem With Medical Trade Antibiotics

"Writing in the Journal of Infectious Disease, Dr L. Weinstein, points out that **despite the supposed value of antibiotics, the incidence and mortality of many infectious conditions (such as subacute bacterial endocarditis, streptococcal pharyngitis, pneumococcal pneumonia, gonorrhea and syphilis) have actually increased.**

He notes, somewhat paradoxically, that **the incidence and mortality of other diseases such as chickenpox Have Decreased In The Absence of Any Treatment.**

In September 1990, officials from the Centers for Disease Control (CDC), issued a statement that penicillin and tetracycline should be abandoned as a treatment for gonorrhea, because of a sharp rise in the numbers of bacteria resistant to these Drugs. The CDC now Recommend The Use of the More Toxic, and More Costly cefoxitin and spectinomycin.

Harold C. Neu, Professor of Medicine and Pharmacology, Columbia University, in "The Crisis in Antibiotic Resistance", Science, August 1992, points out that **in 1941, only 40,000 units of penicillin, per day for 4 days, were required to cure Pneumococcal Pneumonia.**

"Today, a patient could receive 24 Million units of penicillin a day, And Die of Pneumococcal Meningitis."

He adds that, bacteria that cause infection of the respiratory tract, skin, bladder, bowel and blood: "Are now resistant to virtually all of the older antibiotics."

The Destruction of Friendly Bacteria

We would probably die from all sorts of opportunistic infections if not for the "good" bacteria.

These bacteria live in: Mouth, Skin, Genitalia, and in the Intestinal Tract.

Bacteria that normally live on your skin, for example, secrete substances that protect against Bacterial, and Fungal infections of the skin.

Lactobacillus bacteria living in the gut and the vagina help protect against invasion by yeast and other germs. The intestinal tract is home to countless different varieties of microbes, most of which live in harmony together.

They exist in what scientists call a symbiotic relationship, meaning they benefit from the existence of one another.

The bacterium Lactobacillus acidophilus is one of the more important beneficial bacteria. It plays a role in the digestion of food and the manufacture of vitamins B1, B2, B3, B12 and folic acid.

It also secretes substances that destroy invading infectious bacteria, parasites and fungi (e.g. acidophilin, a natural antibiotic, various organic acids and peroxides). Bifidobacterium bifidus is another important intestinal bacterium, especially in children.

One reason breastfed children suffer from fewer intestinal infections than bottlefed children is the high number of Bifidobacteria in the intestines of breastfed babies. When breastfeeding is discontinued, the number of Bifidobacteria (Bifidus) in the intestine decreases dramatically.

Another way that the normal intestinal bacteria protect against infection by invaders is by occupying space.

If the good bacteria are eliminated, opportunists can move in and set up shop. The opportunists compete with the other intestinal organisms for nutrients. Worse, they rob nutrients from the host.

As they gain a stronger hold, they make it easier for other members of their species to invade and get a foothold; they multiply.

This reduces the integrity of the intestinal tract, sometimes called a "Leaky Gut" [Intestinal permeability], increases the chance of developing allergies, and lowers the level of health." - Dr Michael A. Schmidt, MD, in "Beyond Antibiotics", 1994.

> ***"I maintain that Modern Medicine is the study of what happens when you put Toxic Chemicals into Malnourished Bodies. The only way it's going to really work is to have an incentive for Hospitals to empty. Unfortunately, they make their money when the beds are full, so there is vested interest built into the system to have people sick."*** *- Dr Andrew Saul, PhD, in interview "Hospitals and Health", 24 March 2012.*

> ***"For in much wisdom is much grief; and he that increaseth knowledge increaseth sorrow."*** *- Ecclesiastes 1:18*

The Case of Ingrid Betancourt Mother

"My mother, was 78 years old, and was an Active and Independent woman, with a General Good Health.

She had a car, and would drive daily.

On the 5 of August 2013, while on a Routine Health Check Up, for Glaucoma Levels at her local Hospital, she took the Bus instead, that day, returning back home from Hospital.

When entering the Bus, the Bus driver drove away without closing the Bus door, and she fell on to the pavement. She was then taken to the Hospital.

Admission to Hospital (First Time)

5 August 2013 (Admission day to Hospital)

Diagnosis and Condition at time of entry at Hospital:

Head Stroke left temporal zone Traumatic Brain Injury, complicated left temporal contusion and subarachnoid haemorrhage.

The Medical Trade professionals also diagnosed her with "Inappropriate Antidiuretic Hormone Secretion Syndrome".

Evolution

The evolution was favourable.

The Glasgow Coma Score was 15

(The Glasgow Coma Score is scored between 3 and 15, 3 being the worst, and 15 the best)

Day 1 - **Medical Trade Drugs Given:**

1. **Dipyrone** (Metamizole)
2. **Phenytoin**
3. **Ranitidine** (Zantac)

6 August 2013

Day 2 - **Medical Trade Drugs Given:**

1. **Dipyrone** (Metamizole)
2. **Phenytoin**
3. **Ranitidine** (Zantac)
4. **Lumigan** (Bimatoprost)
5. **Timolol**

7 August 2013

Day 3 - **Medical Trade Drugs Given:**

2. Phenytoin
3. Ranitidine (Zantac)
4. Lumigan (Bimatoprost)
5. Timolol
6. Atorvastatin (Lipitor)
7. Hydrochlorothiazide
8. Acetazolamide (Diamox)

8 August 2013 until the 29 August 2013

Day 4 to day 25 - **Medical Trade Drugs Given:**

1. Dipyrone (Metamizole)
2. Phenytoin
3. Ranitidine (Zantac)
4. Lumigan (Bimatoprost)
5. Timolol
6. Atorvastatin (Lipitor)
7. Hydrochlorothiazide
8. Acetazolamide (Diamox)
9. Alprazolam (Xanax)
10. Nefersil (Clonixin lysine (a derivative of Clonixin) is reported as an ingredient of Nefersil)
11. Losartan (Cozaar)

13 August 2013
Patient in good general conditions, **but with Constipation.**

20 August 2013
Patient in **Good General State.**

28 August 2013
Presents **delusional ideas, hides medications in the mouth.**

> ***"The More Drugs a patient Was Taking, The Higher the Risk of Fatal Side Effects." -*** *in "Drug Effects Blamed for Fifth of Hospital Deaths Among Elderly", British Medical Journal, 3 November 2001.*

At the same time; I am being informed by family members that she was refusing to take Drug Medication. I then called my mother, and told her that she needs to be relaxed, be patient, and take the Medical Trade Drugs.

To which she replied:

"They Are Poisoning Me!"

When a family member went to visit my mother at the hospital, **my mother gave her the poisonous Medical Trade Drugs to take them away in their pockets, in order for the Medical Trade Not Force her to take their Poisons Drugs.**

Which the Medical Trade in their Delusion call these poisons "Medicines."

> ***"We Have a Natural Fear of Such Large Doses, On Account of The Almost Certain Occurrence of Toxic Symptoms; dry throat, dilated pupils."*** *- Dr A. Everett Austin, MD in "Diseases of the Digestive Tract and Their Treatment", 1916.*

> ***"Every Drug Increases, and Complicates the patients Condition."*** *- Dr Robert Henderson, MD*

30 August to 2 September 2019

Day 26 to Day 29 - **Medical Trade Drugs Given:**

2. Phenytoin

> ***"Rash Rates Were Highest With Phenytoin,*** *Lamotrigine, and Carbamazepine." - in "Neurology", 15 May 2007.*

> ***"Phenytoin Induced Stevens-Johnson Syndrome*** *exacerbated by cefepime" - in Journal of Pharmacology and Pharmacotherapeutics, October 2013.*

3. Ranitidine (Zantac)
4. Lumigan (Bimatoprost)
5. Timolol
6. Atorvastatin (Lipitor)
11. Losartan (Cozaar)
12. Heparin (unfractionated heparin)

Stevens-Johnson Syndrome / Toxic Epidermal Necrolysis

> ***"Phenytoin is one of the most common causes of antiepileptic-related cutaneous adverse reactions, including life-threatening Stevens-Johnson Syndrome, and Toxic Epidermal Necrolysis."*** *- in "Phenytoin: risk of Stevens-Johnson syndrome", GOV.UK, January 2010.*

> ***"In 2003, he was started on Phenytoin for his partial seizures. He had previously had an anaphylactic reaction to carbamazepine. Three weeks after starting Phenytoin, he broke out in a generalized body rash involving both skin and mucous membranes.***
> ***A diagnosis of Steven–Johnson Syndrome was made." - in "Phenytoin Induced Steven–Johnson Syndrome*** *and bronchiolitis obliterans – case report and review of literature", Respiratory Medicine Case Reports, 2016.*

> ***"Steven-Johnson Syndrome (SJS) is a Severe Skin Reaction often Triggered by Certain Medications, including Sulfonamide Antibiotics, antiepileptic drugs like Phenytoin, Lamotrigine, and some NSAIDs (oxicam group). SJS and Toxic Epidermal Necrolysis represent different degrees of the same underlying condition, with the distinction based on the extent of body surface area affected. In Toxic Epidermal Necrolysis,*** *there is more extensive body surface area involvement,* ***while SJS might begin with nonspecific symptoms such as fever, fatigue, headache, and respiratory signs, followed by painful blistering and erosion of the skin and mucous membranes.*** *The intensity of drug reactions can range significantly, with SJS being a rare yet critical form of drug-induced skin hypersensitivity.* ***Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis, life-threatening mucocutaneous reactions characterized by extensive epidermal necrosis and detachment. Both Conditions Are Commonly Induced by Medications, with Anticonvulsants, Antibiotics, and Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) among the most frequent culprits."*** *- in "Exploratory Research in Clinical and Social Pharmacy", September 2025.*

3 September 2019

Her condition stable and was discharged from Hospital, sent home, and given a list of Medical Drugs:

2. Phenytoin
3. Ranitidine (Zantac)
4. Lumigan (Bimatoprost)
5. Timolol
6. Atorvastatin (Lipitor)
11. Losartan (Cozaar)
13. Quetiapine (Seroquel)

9 September 2019

This day she started having Side Effects From the Medical Trade Drugs given to her:

1. Fever.
2. Allergy (With Scratching Sensation Throughout the Entire Body)

Because of this **"Scratching Sensation Throughout the Entire Body"**, my mother said:

> ***"Please don't take me back to the Public Hospital, because I don't feel that comfortable there, I don't think it is making me any good."***

Taken to consultation to a Private Clinic **(Was seen by the same Medical Trade Doctor, that was prescribing her in the Public Hospital).**

Drug **2. Phenytoin**, replaced by:

14. Levetiracetam (Keppra).

> ***"The Stevens–Johnson Syndrome (SJS) is a Life-Threatening Skin condition, which affects the skin and the mucous membranes. This Syndrome Is Closely Related to the Application of Antiepileptic Drugs (AEDs). Most cases are caused by Phenytoin,*** *Carbamazepine, Oxcarbazepine, Phenobarbital, Lamotrigine."* ***- in "Stevens–Johnson Syndrome Induced by Levetiracetam",*** *Seizure, 2012.*
>
> ***"The U.S. Food and Drug Administration (FDA) is warning that the antiseizure medicines Levetiracetam (Keppra, Keppra XR, Elepsia XR, Spritam) and Clobazam (Onfi, Sympazan), can cause a rare but serious reaction that can be life-threatening if not diagnosed and treated quickly. This reaction is called Drug Reaction with Eosinophilia and Systemic Symptoms. It may start as a rash but can quickly progress, resulting in injury to internal organs, the need for hospitalization, and even Death." - in "FDA warns of rare but serious drug reaction to the antiseizure medicines Levetiracetam; Unexplained Rash, Fever, or Swollen Lymph Nodes Develop",*** *FDA Drug Safety Communication, 28 November 2023.*

12 September 2019

On this day she felt poorly, and Asked Not To Be Taken Back To The Same Hospital, thus, she was taken to a private clinic.

21:14

The Diagnostic at Admission was:

1. Fever 38.5 C.
2. Trembling.
3. Urticaria Lesions (itching) throughout the entire body.
4. Swollen lips, Oedema on the Lips (Angioedema)
5. Dry mucous membranes (Sjögren's syndrome)
6. Oropharyngeal Candidiasis.

List of Medical Trade Drugs Given at the Private Clinic:

1. Dipyrone (Metamizole)
15. Captopril (Capoten)
16. Omeprazole (Prilosec, Losec)
17. Chlorphenamine (Chlorpheniramine)

Diagnosed With Toxic Epidermal Necrolysis

In this same day she was diagnosed with Toxic Epidermal Necrolysis. At 22:55 she was transferred to the hospital she had been previously. Taken to the Intensive Treatment Unit.

13 September 2019

Medical Trade Drugs Given at the Hospital:

17. Chlorphenamine (Chlorpheniramine)
18. Dalteparin (Fragmin)

14 September 2019

Her skin starts to progressively fall, in her back, face, arms and legs. Given a Glasgow Coma Score of 15.

Medical Trade Drugs Given:

17. Chlorphenamine (Chlorpheniramine)
18. Dalteparin (Fragmin)
15 to 16 September 2019

6:30 Her condition was: Agitated and Confused.

9:00 Her compromised surface 46%, and worsening.

Medical Trade Drugs Given:

4. Lumigan (Bimatoprost)
5. Timolol
16. Omeprazole (Prilosec, Losec)
18. Dalteparin (Fragmin)
19. Diazepam (Valium)
20. Fentanyl (Opioid)

17 to 19 September 2019

4. Lumigan (Bimatoprost)
5. Timolol
16. Omeprazole (Prilosec, Losec)
17. Chlorphenamine (Chlorpheniramine)
18. Dalteparin (Fragmin)
20. Fentanyl (Opioid)
21. Vancomycin (Antibiotic)
22. Ceftazidime (Fortaz), (Antibiotic)

As a Result of Body System Intoxication by Poly-Pharmacy, her skin started to pell off, by the 19 September she had 46% of the skin in a compromised state. Which required surgical removal, which resulted in a state of transient bleeding.

Mechanical Ventilation Death Sentence

*"**High Mechanical power of Ventilation is independently Associated with Higher in-hospital Mortality, and several other outcomes in Intensive Care Unit patients receiving invasive Ventilation for at least 48 h.**" - in "**Mechanical power of Ventilation is Associated with Mortality** in critically ill patients: an analysis of patients in two observational cohorts", Intensive Care Medicine, 2018.*

*"**The need for Mechanical Ventilation appeared to be a Death Sentence for Covid-19 patients, with Mortality Rates as high as 97%.**" - in "American Journal of Nursing", September 2020.*

*"**We now think Putting Someone on a Ventilator is almost a Death Sentence.**" - Dr Paul Casey, MD, medical director of Bellin Health Emergency Services, Green Bay, in "The Morning Show" , WPR, 22 April 2020.*

*"In severe acute respiratory failure treated with lung rest and extracorporeal life support, **a predicted 50% Mortality Rate Was Associated with 5 days of Preextracorporeal Life Support Mechanical Ventilation.**" - in "Mortality is directly related to the duration of mechanical ventilation before the initiation of extracorporeal life support", Critical Care Med., January 1997.*

Orotracheal Intubation With Mechanical Ventilation

20 September 2019

It begins a lot of secretions difficult to evaluate by blood that is also aspirated by mouth and upper airway. **Nutrition is suspended and Vancomycin and Meropenem are given. Orotracheal Intubation was performed and Midazolam given. The Medical Trade decided to Induced Coma with connection to Mechanical Ventilation.**

1. **Dipyrone** (Metamizole)
4. **Lumigan** (Bimatoprost)
5. **Timolol**
16. **Omeprazole** (Prilosec, Losec)
17. **Chlorphenamine** (Chlorpheniramine)
18. **Dalteparin** (Fragmin)
20. **Fentanyl** (Opioid)
21. **Vancomycin** (Antibiotic)
23. **Meropenem** (Merrem), (Broad-Spectrum Antibiotic)
24. **Midazolam** (Versed)
25. **Oftagen** (Gentamicin sulfate)

21 to 24 September 2019

Continues in a serious condition with **Mechanical Ventilation, Dressings throughout the Body has Large Burns.**

1. **Dipyrone** (Metamizole)
4. **Lumigan** (Bimatoprost)
5. **Timolol**
16. **Omeprazole** (Prilosec, Losec)
17. **Chlorphenamine** (Chlorpheniramine)
18. **Dalteparin** (Fragmin)
20. **Fentanyl** (Opioid)
21. **Vancomycin** (Antibiotic)
23. **Meropenem** (Merrem), (Broad-Spectrum Antibiotic)
24. **Midazolam** (Versed)
25. **Oftagen** (Gentamicin sulfate)

During the evening of the 21 September in a State of Fever. And on the 23 September with severe aspiration Pneumonia. And continues sedated in Coma.

With 95% of the Skin In A Compromised State. During the night they suspend the **Medical Trade Drug Vancomycin. On the 24 September, the Dermatologist becomes aware of the clinical state and makes the diagnosis of Toxic Epidermal Necrolysis (a more severe form of Stevens-Johnson Syndrome).**

*“**Severe Skin Reaction, together with Stevens-Johnson Syndrome** it forms a spectrum of disease, with **Toxic Epidermal Necrolysis being more severe.** Early symptoms include Fever and a few days later the skin begins to blister and peel forming painful raw areas. Mucous membranes, such as the mouth, are also typically involved**. Complications include Dehydration, Sepsis, Pneumonia, and Multiple Organ Failure.”** - in “Wikipedia”, 2019.*

25 of September 2019

The list of Medical Trade Drugs was maintained to which it is added added:

26. Linezolid (Antibiotic).

26 of September 2019

The same list of Drugs given since the 21 September, and Increasing the Drug Dosage of 20. Fentanyl (Opioid), from 200mg to 250mg. At night with Fever.
Following her state Gram-negative bacteria was found.
The following Medical Trade Drug is suspended: 23. Meropenem (Merrem), (Broad-Spectrum Antibiotic).

And another Drug was introduced:

27. Colistin (Polymyxin E), (Antibiotic)

Renal and Neurological Side Effects of Colistin in Critically Ill Patients

“Colistin is a complex polypeptide Antibiotic composed mainly of Colistin A and B. It Was Abandoned From Clinical Use in the 1970s because of Significant Renal and Neurological Toxicity. Renal toxicity is the most common adverse effect of Colistin treatment because the drug is excreted primarily by the kidneys and elevated blood levels May Further Impair Renal Function. Neurotoxicity: The interaction of Colistin with neurons, which have high lipid content, has been associated with the occurrence of peripheral and Orofacial Paresthesias, Visual Disturbances, Vertigo, Mental Confusion, Ataxia, Seizures. The most dreaded Neurotoxic event, however, is neuromuscular blockade presenting as a myasthenia-like syndrome or as respiratory muscle paralysis producing apnea. Potential Triggers of Neurotoxicity are Hypoxia, Concomitant Medication (muscle relaxants, narcotics, sedatives, anesthetic drugs, and corticosteroids), and Impaired Renal Function. Diagnosis of Neurotoxicity is mostly made on clinical grounds, making it difficult to discriminate between eventual Colistin Induced Neurotoxicity and the more frequently observed “critical illness

> ***Polymyoneuropathy" in Intensive Care Unit patients. In one study, electrophysiological measurement was performed in a limited number of patients who had received Colistin for at least 7 days. Among these patients, 50% exhibited typical features consistent with critical illness Polymyoneuropathy (Damage to Multiple Peripheral Nerves, and Myopathy Muscle Damage)."*** *- in "Renal and Neurological Side Effects of Colistin in Critically Ill Patients", Ann. Intensive Care, 25 May 2011.*

27 of September 2019

With Diarrhoea, and presents Severe Anaemia, and blood transfusion was given. The list of Medical Trade Drugs was maintained.

28 to 29 of September 2019

Situation Deteriorated. The list of Medical Trade Drugs was maintained.

30 of September 2019

Condition **Very Severe with Fever during the weekend. Now with Candida Albicans present. And diarrhoea with Clostridioides Difficile. The list of Medical Trade Drugs was maintained, and Increased with Another 3 Drugs.**

The Following Medical Trade Drugs where Added:

28. Fluconazole (Antifungal)
29. Demerol (Pethidine, Meperidine), (Opioid)
30. Metronidazole (Flagyl), (Antibiotic)

1 of October 2019

High Inflammatory Parameters.
The List of Medical Trade Drugs was maintained.

2 of October 2019

T**he Condition Now Highly Serious with Anaemia. The list of Medical Trade Drugs was maintained. And Increased the following where Added:**
31. Caspofungin (Cancidas), (Lipopeptide Antifungal)

My Mother Final Day, at 18:20 She Passed Away (Died)." - in " Medicine & Poisonous Pharma", 2020.

The Pharmaceutical Blunderbus

“This often succeeded where The Pharmaceutical Blunderbus Had Failed.

For the Pharmaco-Dynamics was applied in the very direction To Do Most Injury to the patient. For Instance:

1. The giving of Bromides to patients whose agitation was in reality due to impaired efficiency of the cerebral cortex.

2. The giving of Strychnine in fatigued states, where cells required rest and not whipping.

3. The producing of sleep by Narcotics, when the need was Oxidation rather than Stupefaction.

4. The Prescribing of so-called Anti-Spasmodics in cases of which the pathogenesis was purely Psychical (mind, psyche, or spirit), and where the Physical results - Are Best Treated When Most Ignored.” - Dr Tom Williams, MD, in “Physiological measures in the Therapeutics of Nervous Disease”, The American Journal of Physiologic Therapeutics, January 1911.

Ingrid Betancourt Mother Case

Every Day Her Condition Deteriorated Under Medical Trade Treatment;
Which Consists in Giving People in Hospital:
Toxic Poisonous Chemicals which the Medical Trade Calls It Medications

In Hospital: You Don’t Die From The Disease; You Die From The Medication

It Is The Medication that Kills You

17 September 2013

“In this day, I was at my Mothers Bed Side, in the Hospital. By this time she was in a state of Semicomatose, whereby the Toxic burden from the Medical Trade Pharmaceutical Medication had taken her toll on her, she was in a state of semi-coma caused by drugs that they where giving and forcing on her.

Polypharmacy

This Pharmaceuticals (sedatives) directly depress the Central Nervous System, this suppression indirectly affect brain function, causing varying degrees of injury or toxic strain to the body's internal organs. While I and my family and friends where praying for my mother The Medical Trade Using Poly-Pharmacy where Poisoning my Mother to Death.

“Inappropriate Polypharmacy; the use of Excessive or Unnecessary Medications; increases the risk of Adverse Drug Effects, including: falls and cognitive impairment,

> ***harmful drug interactions, and drug-disease interactions, in which a medication prescribed to treat one condition Worsens Another or Causes a New One. Patients may be prescribed medicines that are Unlikely To Help, Potentially Harmful, or Misaligned with the Person's Health Goals. Polypharmacy also Creates a Tremendous Burden for patients and their families." - in "The Dangers of Polypharmacy and the case for deprescribing in older adults",*** *National Institutes of Health, 24 August 2021.*

State of Semicomatose and State of Blepharitis

Under this state of Semicomatose, during a moment of awareness from my presence next to her while I was praying for her in loud voice; my mother opens her burned eyes, which were in a State of Blepharitis a reaction from the Pharmaceuticals. She moved her right hand to touch me; and asked me not pray for her, but to pray for the health of every family member. She then Started to Name All Members of the Family by Name; And Prayed For Them. In Her Hospital Death Bed She Started to Pray; Not for Self But For Others; She in Her Death Bed, Poisoned To Death By The Medical Trade; with Poisonous Pharmaceutical Chemicals: She Started to Pray Not for Self, But for Others!

State of Sialorrhea

Then my mother asked me for some water; as she was salivating much (Drug-Medication Induced Sialorrhea by Pharmaceutics such as Diazepam (they where giving her), these Pharmaceuticals trigger the salivary glands to produce extra spit, and interfere with the body natural Swallowing Reflexes). She had a Nasogastric Tube placed on her.

My Mother said:

> ***"My little heart, give me a some water, please, because I am burning from within."***

And started to cough.

1 October 2013 the Day Before her Death at the Medical Trade Hospital.

"I've been focused solely on my mother, and she is still in the Medical Intensive Care Unite; and Every Day Her Condition seems to Deteriorates. And let us remember that: My Mother was taken to hospital; because she fell to the pavement from the door of a moving bus. There was absolutely No Health Condition or Injury; apart from the (Head Stroke left temporal zone Traumatic Brain Injury, complicated left Temporal Contusion and Subarachnoid Haemorrhage) from the Fall. These tend to resolve naturally as the body absorbs the leaked blood. If left on its own, the body with ample rest, care and

nourishment, the body would recover from the injury of the fall. Instead the Medical Trade pursued a Path of Total Annihilation of the Body System. By administering Poisonous Medications, giving 31 needless Pharmaceuticals in total.

> *"Pharmaceutical Companies are wasting billions of pounds developing Needless Drugs." - in "Billions Wasted on Developing Needless Medicines", The Times, 11 July 2019.*

Then the body collapsed; under the Heavy Toxic Burden of Chemical Pharmaceuticals. The body not only had to recover from the fall; but now, it was also expected to Expel, Deal and Cope, with the Toxic Burden and Injury Caused by these Poisonous Chemicals being Pushed On The Patient by the Medical Trade. Phenytoin is considered Highly Toxic because it "has a narrow therapeutic window", and highly unpredictable, dose-dependent metabolism; even small dosage adjustments can trigger severe, life-threatening toxic effects ranging from extreme neurological impairment to cardiac arrest. From such an Amount and Type of Chemical Pharmaceuticals, later lead her to Acquired and Developed Stevens-Johnson Syndrome, a Medication Induced Side Effect of Phenytoin; after taking this Toxic Poisonous for a straight 34 days period from the 5 August to 8 September 2013; being on the 9 September 2013 replaced by Yet Another Toxic Poisonous Pharmaceutical: Levetiracetam).

> ***"On 28 November 2023, FDA is Warning that the antiseizure medicines Levetiracetam (Keppra, Keppra XR, Elepsia XR, and Spritam) and clobazam (brand names Onfi and Sympazan), can cause a rare but Serious Reaction that can be Life-Threatening. This reaction is called Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS). It may start as a rash but can quickly progress, Resulting in Injury to Internal Organs, the need for Hospitalization, and even Death."*** *- in "FDA warns of rare but serious drug reaction to the antiseizure medicines Levetiracetam", FDA Drug Safety Podcast, 8 December 2023.*

She started an Allergic Reaction, and next day her Face and Body Swelled Up; the Skin began to Peel Off. It's as if she has been Burned over 95% of her Body. In the Medical Trade Hospital Intensive Care Unit, where I was able to see her even though she was interacting despite her Peeling Skin. She was transferred to the Medical ICU because she aspirated vomit into her lungs. They placed her on a Ventilator, and sedated her, and performed surgical debridement of her skin. They immediately started her on Broad-Spectrum Antibiotics.

Every day I visited her, I talked to her, and prayed for her, even though she remains Asleep Due to the Sedatives.

The skin is in a very serious condition and prone to infection. On the 1 October 2013, the Medical Trade Doctor told me that they found bacteria in her blood, in addition to fungus on her skin - or rather, on her body, because she doesn't have a skin any longer." - Ingrid Betancourt, 18 October 2013.

The Deadly Hospital Protocols

"We in effect Signed their Death Warrant with Every Unnecessary Intubation; that we did. I can remember arguing with the Doctors, I would say:

> ***"Why are we doing this? It doesn't make any sense."***

And they would just say:

> ***"It's Protocol."***

And that's the only answer that they ever had. My background is in Critical Care, and I worked throughout the pandemic in the ICU directly caring for "Covid" patients. After 18 months of chaos, I left the bedside. Because, **I could not watch one more of my patients needlessly die due to Deadly Hospital Protocols**, and the Denial of Life-Saving Medications. **They were telling us that "Covid" was killing all of our patients. But I contend that this was not the case at all. But instead, it was the complete and total Medical Mismanagement of "Covid" that was killing them. If patients were dying of the "virus" itself, then why were we not pulling bodies from homes and off of the streets and mass? The reality is is that patients, they're not dying at home. They're not dying on our streets.**

They Are Dying in Our Hospitals

They Are Dying in Our Hospitals. And it is time that we start asking ourselves why? I walked away. But if there is one thing that still haunts me from my time working at the bedside, it is the faces of the patients that I knew didn't need to die.

I can't get them out of my head. **And one of the first things I learned in Nursing, especially working in the ICU, is that there are fates far worse than death.** I considered it an honour to be able to provide compassion in a patient's last moments to care for them. But this was different. **These patients, they didn't die from a disease. They didn't die from a "virus." These patients Died in a Hospital Holocaust. And this Shamelessly Corrupt System used its well-intentioned Nurses to carry out their Sinister Plan. The Ventilators, they are the New Gas Chambers. I witnessed numerous alarming signs that these novel Vaccines were Causing Great Harm to patients.**

The Cognitive Dissonance of the Medical Trade Shows Clearly Inconsistency of Thought And The Ability to Hold 2 Contradictory Ideas Simultaneously

It's so hard to to understand. I don't know if it's that they are. Or if it's just Cognitive Dissonance; that they don't want to believe that they could be part of something like that. I think it was a complete, and total wakeup call for me. **I**

didn't I always knew that there was Corruption in the Medical Trade. Sure, I have Long Known that they have Placed Profits Over Patients, but in my wildest dreams, I never imagined that Hospital Systems or the Government; would be murdering patients for profit. That is exactly what was happening to our patients. **They were being Murdered for Profit.** And it's hard to even when you're inside of that system, when you're inside of it, it's really difficult to see because you're so close. **So I think it there's a lot of it is Cognitive Dissonance.** Another is that **People just won't put themselves out there for that. They Are Afraid of Losing their Income, and their their Career. But I, at no point could I ever imagine putting a Pay Check Before Human life."** - Kimberly Overton,BSN, RN, BC-FMP, Critical Health Nurse, USA, in "Hospitals Killed Covid Patients On Purpose For Profit! Says Nurse", The Jimmy Dore Show", 18 May 2026.

Killed By The Medical Trade With 31 Pharmaceutical Drugs

1. First they gave the Medical Trade Poisonous Drugs, that Are Known to Cause Stevens-Johnson Syndrome / Toxic Epidermal Necrolysis.

The Mortality for Toxic Epidermal Necrolysis is 30 – 40%.

2. Then they placed her on Mechanical Ventilation: which has a 50% Death Rate.

> ***"I want to reach some Conclusions: 1. Beware of Lovers, and of Healthcare Professionals; 2. Suspect Poisoning."*** *- Prof. Dr Robin Ferner, MD, MSc, FRCP, FBPharmacolS, FBToxicolS, in "**Medicines and Murder**", Medico-Legal Journal, 2021.*

> ***"While it is a fact that the healthy organism will stand a remarkable amount of abuse, and for a long time will resist the Injurious Effects of Drugs and Chemicals that are used habitually, yet the time comes to almost every one when the resisting powers are not up to the normal standard, and then an apparently sudden giving way occurs."*** *- Dr Edward M. Gramm, MD in "North America Journal of Homeopathy", 1912.*

> ***"As to Treatment, one Extravagance has Followed Another; some cases have recovered, and the others have Died. Every one thinks he has cured some; None Will Admit that they have Damaged some, and Killed Others."*** *- Dr Harry Hakes, MD in "Transactions of the Luzerne County Medical Society", 1887.*

> ***"Many of us, myself included, have seen folks Go Into a Hospital, for one problem or another, and end up Coming Out A Lot Sicker than when they went in, and In Some cases Dying as a Result. How come this story is not on the Front Pages of Newspapers every single day."*** *- Senator Bernie Sanders, 2014.*

Avoid Hospitals As Much As You Can

"What else can we do about Hospitals? We can avoid them. We can ensure to avoid them as much as we can. Another thing that people need to do when they go into the Hospital, and I got this from a Nurse, she said: **"Bring a guard. I would never let a family member go into the hospital alone. Make absolutely sure that a friend or family member is with them 24 hours a day."** The elderly consume by far the most Healthcare Dollars, and it's widely known that the elderly also have the worst diets. As people get older, their sense of taste and smell and desire to drink all go down. This can result in a lot of serious problems. To make it short, it turns out he had Vitamin B12 deficiency. After a few shots of Vitamin B12 he was perfectly alright, and they sent him home. It's amazing how many real illnesses turn out to be deficiency diseases. Dr Hoffer and these other wonderful physicians and researchers who showed that nutrition is better than drugs. In "Hospitals and Health", 2010, the last manuscript written by Dr Abram Hoffer, MD, the famous Canadian psychiatrist who showed in placebo controlled, double-blind studies in 1953, that high doses of Niacin were curative of Schizophrenia and other similar mental disorders. Dr Hoffer, in his study of biochemistry (he had a PhD in Biochemistry and Medicine), noted that over the years there had been attempts to treat psychiatric illnesses by communities that didn't have hospitals. One was the Quaker Community. And the Quakers, Dr Hoffer found that if they took the mentally ill, put them in a nice house, gave them Good Food, and gave them Compassionate Care, that they had a 50% cure rate. In Britain, they tried an experiment giving Good Food and Vitamin Supplements to inmates. And they had an immediate decrease in violence by 35%.

> ***"Prisoners became less violent after diet change. The Prison Service has said it will not fund further research into prison food even though a recent study (Oxford University Physiology Department) found that changing inmates diets cut violent behaviour by 35% [they found that those who had the extra nutrients committed on average 26% fewer disciplinary offences than the rest, and 37% fewer violent offences]."*** *- in "Row over prison Diet Research", BBC News, 17 February 2003.*

Dr Hoffer commented that drugs have about 10% cure rate. He was thinking that drugs might actually be going in the wrong direction, and hospitals give a lot of drugs. When people go into the hospital, they're going to have problems. Statistically, there are so many errors in hospitals that the average works out to one error per patient per day at the minimum. I maintain that Modern Medicine is the study of what happens when you put Toxic Chemicals into Malnourished Bodies. The only way it's going to really work is to have an incentive for Hospitals to empty. Unfortunately, they make their money when the beds are full, so there is vested interest built into the system to have people sick." - Dr Andrew Saul, PhD, in interview "Hospitals and Health", 24 March 2012.

The Disconnect of the Medical Trade From Reality

> ***"Today's scientists have substituted mathematics for experiments, and they wander off through equation after equation, and eventually build a structure which has no relation to reality."*** *- Nikola Tesla, in "Modern Mechanix and Inventions", July 1934.*

There is this huge disconnect between reality, and the Medical Trade Theories, which to put it mildly range from farcical to outright criminal.

> ***"The human body should be an organic garden. And as we kill it, through our environment, through our medical interventions, we get more and more stale. We put cancer patients in hospital rooms that have now been sterilized from any Microbiome whatsoever, stick them in a room, give them tons of chemotherapy to completely annihilate their immune system and their Microbiome, and then hope they survive, this symptom of isolation on top of their disease process."*** *- Dr Zach Bush, MD in "Interconnected", Docuseries, 2018.*

The Medical Trade Is Mentally Unwell

How is it possible, as an example, for hundreds of thousands, that daily, the Medical Trade surgically removes healthy breast from women, by the sole reason that they instigate the fear of Breast Cancer, happening to them, just because some one in their family also had it, thus it is "Genetic".

Who is at fault? **The Medical Trade that deceives the Uneducated?**

Or, the Credulous that goes along with the latest Nonsensical Medical Trade Stupidity? For indeed known in what you believe, and who is the author of your believes. For indeed, in front of you, there is that which is real and true.

But chose thou, in what you believe in. For the Advise is: Do not sell your soul like many others.

The so-called "Medical Science", the Medical Trade is based upon Nonsensical Theories, of the Absurd Kind.

Emunctology is based upon Truths: Which are Immortal!

Each individual has a choice; in front of you, there is Good, and there is Evil.

Choose thou!

The Medical Trade Suffers from Compulsive Lying Disorder

The Medical Trade Suffers from Compulsive Lying Disorder, also known as Pathological Lying.

It involves a Pervasive Pattern of Intentionally Making False Statements with the Aim to Deceive Others.

It is a Psychological Condition Characterized by a Persistent And Habitual Tendency to Lie. Individuals with this disorder may tell elaborate, detailed, and dramatic stories, sometimes Believing Their Own Fabrications, and Often Show Little Guilt or Remorse. Compulsive Lying Disorder is often associated with other Mental Health Conditions like narcissistic personality disorder.

> ***"When we look at lying generally, we see that people tend to lie when they have a motivation or an incentive to lie. And those motivations and incentives are more common in some professions than others. And do they really grasp the consequences of their falsehoods?"*** *- in "Speaking of Psychology: Can a pathological liar be cured?", American Psychological Association, January 2023.*

> ***"We do an abysmal job in Heart Disease prevention in our Medical System right now. The current studies show that the Statin Drugs really don't work for women, particularly after menopause, and that there's possibly a 50% Risk of Diabetes in women using those Medications."*** *- Dr Mark Menolascino, MD in "Interconnected", Docuseries, 2018.*

Medical Trade Devices Induce Infection

"Biofilm is complex and consists of bacterial colonies that reside in an exopolysaccharide matrix that attaches to foreign surfaces in a living organism.

Biofilm Frequently Leads to Nosocomial, Chronic Infections in Clinical Settings. Since the bacteria in the biofilm have developed antibiotic resistance, Using Antibiotics alone to Treat Infections brought on by biofilm Is Ineffective.

A Biofilm is a community of microorganisms, such as bacteria, that are capable of living and reproducing as a collective entity known as a colony.

Biofilms are living biomass that possess a sophisticated social structure, researchers in this field are still attempting to decipher. Many human diseases, and the colonization of medical devices are linked to microorganisms growing in biofilms and these microorganisms are very resistant to antimicrobial treatments. Biofilm formation initiates the disease process through various mechanisms, such as the detachment of individual bacterial cells or clusters of cell aggregates, the production of endotoxins, heightened evasion from host immune system surveillance, and the establishment of a protective barrier conducive to the emergence of immune-resistant organisms.

Infections Attributed to Biofilms

Several studies on Infectious Diseases have pointed to an association with Biofilms. Conservative estimates suggest that roughly **70% of All Bacterial Infections Are Linked With Biofilm.**

Biofilms on Medical Devices

Costerton was the first to Demonstrate an Association between Biofilm and Medical Devices. Subsequent studies have demonstrated urinary catheters, central venous catheters, indwelling stents, contact lenses, intrauterine devices, and dental chair water lines all to be susceptible to bacterial adhesion and biofilm formation." - in "Microbial Biofilm: A Review on Formation, Infection, Antibiotic Resistance", Microorganisms, 19 June 2023.

Medical Radiation Induces Cancer Leukemias

"Leukaemia is the most common childhood Cancer, accounting for nearly 1/3 of all Cancers among children aged <15 years. Acute Leukaemia accounts for the majority of paediatric cases, with 80% Acute Lymphoid Leukaemia. **The Association between high doses of Ionizing Radiation and Leukaemia Is Well Established. The Risk of childhood Leukaemia Associated with *in utero* exposure from Maternal Abdominal Diagnostic X-Rays has been studied extensively. The results of several case–control studies from the 1950s to 1980s showed a ~1.3- to 1.5-Fold Increased Risk of Leukaemia.** The results suggest that **Exposure to Post-Natal Diagnostic X-Rays is Associated with Increased Risk of childhood Acute Lymphoid Leukaemia, specifically B-cell Acute Lymphoid Leukaemia."** - in **"Diagnostic X-Rays and Risk of childhood Leukaemia"**, International Journal of Epidemiology, December 2010.

The Number of Cancer Leukemias Generated Every Year By Medical Trade Diagnosis

"In 1986, Evans published an estimate in the New England Journal of Medicine stating that about **1% of all Leukemias were attributable to Diagnostic X-Rays.**

Estimates are markedly lower than the 23% figure reported by Preston-Martin et al. (1989) based on a case-control study of chronic myeloid Leukemia in relation to Diagnostic X-Rays. Hall correctly interpreted his absolute risk estimate as **"The number of Leukemias Generated Each Year by the Practice of Diagnostic Radiology"** i.e., the increase in lifetime risk generated by a single year's practice.

However, by dividing this by the natural life-time risk of Leukemia, he mistakenly concluded that "Less than 1% of **Cancers may reasonably be attributed to Radiographic Procedures**", this figure represents only the proportion that could be attributed to a single year's practice. **A simple adjustment would be to multiply his estimates by 70 to obtain a range of 2.9% to 4.5%." - in "Risk of Leukemia Caused by Diagnostic X-rays"**, Health Physics, 1992.

Indiscriminate Drugging

The Body Doesn't Need Any Pharmaceutical Medication to be well; Pharmaceutical Medication Only Causes Distress, and Brings Disease.

Medical Trade Drugs are Deleterious; either by interfering with Nutrition, disturbing Metabolism, or Poisoning the Nerve or Muscle Cells.

The only safeguard against Harmful Treatment of Disease is a knowledge of Living Function in Health.

> ***"The accumulated knowledge of the centuries claimed by the old school and the Therapeutic accuracy of the new school should be linked as partners. Indiscriminate Drugging service only to mask the symptoms of disease and allow its progress to go on unchecked. Baneful Drugging lowers the patient's resistance, the preservation and revival of which alone can restore the patient. Drugging has been rashly seductive and experimental."*** *- in "North American Journal of Homeopathy", February 1919.*

> ***"The fewer remedies you employ in any disease, the better for your patient."*** *- Professor, Dr H. G. Cox, MD, in "Practical Hydropathy", 1870.*

> ***"The possession of a diploma or degree from a school or university of reputation was the only requisite for practice. The practice itself, no matter how destructive, signified little so long as it was the 'established practice."*** *- Dr Samuel Dickson, MD, in "The Destructive Art of Healing", 1855.*

Guillain–Barré Syndrome

> ***"In my clinical practice I have witnessed first-hand the tragedy and the triumph of Guillain-Barré Syndrome. I have treated early cases with High Dose Intravenous Vitamin C and, in some instances, successfully prevented hospitalisation. Yet I have also seen the heartbreak of patients who arrived too late — already on the slope toward paralysis, respiratory distress, and weeks or months in hospital. The typical patient experiences "ascending paralysis": numbness or tingling in the feet and legs, progressing to weakness in the thighs, arms, trunk, and face. Reflexes vanish. Muscles waste. Swallowing becomes difficult. Breathing falters. About a quarter of patients require mechanical ventilation at the peak of illness. Pain is common — deep muscle aches, stabbing nerve pain, or burning skin hypersensitivity."*** *- Dr Ian Brighthope, MD, in "Guillain–Barré Syndrome: Beyond the Label", 10 October 2025.*

95% World Population With Health Problem 33% With More Than 5 Diseases

"Just 1 in 20 people worldwide (4·3%) had no health problems in 2013.

1/3 of the World's Population (2·3 Billion individuals); experiencing more than 5 ailments, according to a major new analysis from the Global Burden of Disease Study (GBD) 2013." - in "Global, regional, and national incidence, prevalence, and years lived with disability for 301 Acute and Chronic Diseases and injuries in 188 countries, 1990–2013: a Systematic Analysis for the Global Burden of Disease Study 2013", The Lancet, 7 June 2015.

The Medical Trade Drugs: Pharmaceuticals & Their Toxic Effects on Blood Formation And the Bone Marrow

"1. **Production of Abnormal Pigments:** Analine derivatives, phenacetin, sulphone, nitrates and nitrites. The commonest cause is the production of **methaemoglobin (unable to release oxygen to the tissues).**

2. Precipitation of Porphyria: This is secondary to alcohol, barbiturates, sulphonamides, progesterone, chloroquine, and griseofulvin in susceptible persons.

3. Polycythaemia: No drug actually produces polycythaemia, but the indirect action of those in group 1 will cause an erythropoiesis leading to secondary polycythaemia.

4. Thrombocytopenia: Alkalating agents, antimetabolites, quinidine, "Sedormid", iodides, atropine, procaine, penicillin, bismuth, mercury, phenacetin, salicylates, and many others. **The Drug may either cause a morphological change in the megakaryocytes or may cause an immediate fall in platelets due to an antigen/antibody reaction. In the latter, the drug is bound to the platelet protein causing a modified hapten which acts as an antigen which in turn causes lysis of the platelet.**

5. Leukaemia: Phenylbutazone.

6. Leucopenia Agranulocytosis, and Aplastic Anaemia: Radiation, antimitotic drugs, antimetabolites, phenyl-butazone, thiouracil, potassium perchlorate, carbimazole, chloramphenicol, sulphonamides, phenothiazine, etc.

7. Anaemia, hypoplastic/megaloblastic/haemolysis: Hypoplastic anaemia may be associated with chloramphenicol, gold nitrites, etc.

Megaloblastic anaemia may be associated with primidone, phenytoin, phenobarbitone, amylobarbitone, aminopterin, nitrofurantoin, and phenylbutazone (the last two have had only one report of each).

Haemolysis: This may be a direct effect as with phenacetin and phenylhydrazine; recently methyldopa has been included.

Medical Trade Hepato-Toxic Medication

It is almost true to say that Any Drug in sufficient quantity will cause Hepatic Damage (Liver Damage). It usually appears to be an idiosynchronous reaction. The site of action of the Drug may be defined histologically.

8. Cell Necrosis: Carbon tetrachloride Interferes with the Respiratory enzymes, causing anoxia, and secondary Liver Cell Damage. This may also be the mechanism with chloroform, butter yellow, and tannic acid. **Cytotoxic Drugs, and radiation will cause a generalised destruction of the Liver Cells leaving only the reticulin framework.**

9. Reticulo-Endothelial Excitation: Cholangitis is caused by many drugs including arsenic, gold, other heavy metals, silica gels precipitating a direct excitation. An indirect reaction is caused by the production of an antigen/antibody complex as occurs with longacting sulphonamides.

10. Intra-Hepatic Cholestasis: This is a type of retention jaundice with no obstruction to the flow of bile in the large ducts. There is inspissation of bile with or without cholangitis at canalicular level.

I. Cholestasis without cholangitis: Methyl testosterone, “Nilevar”', and other anti-fertility drugs.

II. Cholestasis with cholangitis: Phenothiazines, neoarsphenamine, thiouracil, chlorpropramide, para-aminosalicylic acid, tetracycline (intravenously), erythromycin, and phenindione are a few **of an ever-increasing list of drugs.**

11. Simulating Viral Hepatitis: Mono-amine oxidase inhibitors **(have a 15-25% Mortality if Associated with Hepatic Damage [Liver Damage])**, halothane anaesthetic. Postradiation, chloramphenicol, and nitrofurantoin may also simulate viral hepatitis.

12. Stevens-Johnson Syndrome: This is part of a generalised reaction accompanied by skin lesions, desquamation of the conjunctivae and alimentary tract. It may follow the use of Phenobarbitone, Phenylbutazone, and Sulphonamides, or may occur in conjunction with glandular fever.

Myocardial Infarctions

Patients with myocardial infarctions form a large part of the total number of admissions each year in an acute medical unit. Infarction also occurs more frequently in patients with Hypertension, Diabetes Mellitus, Excessive Obesity, and in heavy smokers.

Cardiogenic Shock

This is a state of circulatory failure characterised by: arterial hypotension, sweating, pallor, clammy skin, and a small volume pulse.

There may also be restlessness, mental apathy, and confusion.

Oliguria may occur leading to a high urinary specific gravity (1024+-) and an elevated blood urea. The cardiac output falls because the central venous pressure is low, causing failure of the right heart to fill adequately.

As a result of severe muscle damage to the left ventricle the pumping action is inadequate, causing a fall in the systemic pressure. In an attempt to compensate there is severe vasoconstriction of the peripheral tree, and an attempt is made to maintain a reasonable circulation to the coronary arteries and the brain. The vasoconstriction which occurs in the lungs leads to hypoxia and shunting of the blood, precipitating a Metabolic Acidosis, which in turn leads to dilation of the precapillary sphincters and further pooling of the blood in the venous circulation.

This leads to dropping of the central venous pressure, and often an Irreversible State of Shock. Cardiogenic Shock occurs in 20% of all patients following a Coronary Thrombosis and has an 80% Mortality.

The patient often has severe pain, and this is best treated with heroin, either intravenously or intramuscularly.

He should be nursed flat to increase the venous return, and given **Oxygen at 100 % in an effort to improve the arterial hypoxia and Tissue Acidosis.**

Unfortunately, in spite of these measures, the response is often poor due to the marked increase in dead-space and shunting of blood in the lungs.

Correction of the Acidosis; leads to improved cardiac function, improved tissue perfusion, and decreased risk of arrhythmias.

Patients with cardiogenic shock, are in heart failure, and should be digitalised (Digitalis – Fox Glove).

This will increase the force of cardiac contraction, decrease the oxygen requirements of the cardiac muscle, and increase the cardiac output." - in "Investigations in Clinical Medicine", 1968.

"It's Only Through Study: That Education Can Be Obtained; There Is No Education Without Study!" *- Rui Gabirro, Emunctologist*

Medical Trade Sedatives, Palliatives or Any Other Pharmaceutical

Those taking Medical Trade Pharmaceutical: Sedatives, Palliatives, or any other Medical Trade Pharmaceutical, these will only Weaken the Health Condition of those taking these Pharmaceuticals.

Serious Liver Damage (Hepato-Toxicity)

Over 1,000 Drugs are linked to Drug-Induced Liver Injury; including:
1. Pharmaceutical Antibiotics.
2. Non-steroidal Anti-Inflammatory Drugs.
3. Acetaminophen.

It is on the United Nations, World Health Organization's List of Essential Medicines. Drug-Induced HepatoToxicity is a Leading Cause of Drug Withdrawal from global markets. Acute Liver Failure is a notable example of Drug-Induced HepatoToxicity and Occurs with Alarming Frequency.

Liver-Lung Axis

The Liver-Lung Axis is a Bidirectional Communication System, where Liver and Lung State of Health Are Interdependent; primarily mediated by systemic inflammation, immune cell trafficking, and circulating mediators. Liver Disease commonly impacts the lungs through a “Liver-Lung Axis”, where advanced liver dysfunction leads to pulmonary complications, most notably Hepatopulmonary Syndrome, which causes Low Blood Oxygen due to dilated blood vessels in the lungs.

Serious Lung Damage

Please Note Also that there are More than 500 Medical Trade Pharmaceuticals Known to Cause Drug-Induced Lung Disease, from mild irritation to life-threatening fibrosis.

Paracetamol or Acetaminophen (APAP)

Paracetamol or Acetaminophen, a Medical Trade Pharmaceutical sold under various names, including Tylenol and Panadol. Claims to relieve pain [but Doesn’t Resolve the Underlaying Cause of the pain, which is comes from inflammation within the body, caused either: Organically from Toxicity; or Functional from Injury], is also used to “reduce” fever (but it makes No Difference to Fever: Fever Resolves by Itself in 3 to 5 days, With or Without Pharmaceuticals); it is used to “treat” headache (but it just numbs the nervous system; so the person cant feel the pain, in the mean time the inflammation causing the pain carries on; so, it doesn’t resolve it just numbs the pain signals), muscle aches, and cold flu symptoms.

N-Acetyl-P-Benzoquinone Imine (NAPQI) is a highly reactive, Toxic byproduct formed during the liver metabolism of Paracetamol or Acetaminophen.

Excessive paracetamol causes NAPQI accumulation, resulting in Serious Liver Damage (HepatoToxicity).

It depletes glutathione, and binds to liver proteins, resulting in **Liver Cell Necrosis (Liver Cell Death)**, and potential Acute Liver Failure.

Paracetamol or Acetaminophen **Liver Toxicity develop in stages:**

Stage 1 - 0 to 24 hours: Nausea, vomiting, sweating, and pallor.

Stage 2 - 24 to 72 hours: Liver damage becomes evident with right upper abdominal pain, elevated liver enzymes, and signs of Hepato-Toxicity.

Stage 3 - 72 to 96 hours: Fulminant hepatic failure, jaundice, confusion, and potential multi-organ failure.

Stage 4 - 4 to 14 days: Recovery or death from liver failure.

Treatment of Drug-Induced Liver

"Direct Hepatic Toxicity - Drug Metabolism: The liver metabolizes the ingested medications; the Detoxification processes, primarily involved in the inactivation of Toxic compounds or Toxicants. However, when the quantity of these compounds exceeds the hepatic detoxification capacity, it disrupts hepatic cell function, triggering apoptotic or necrotic cell death, which can range from mild to severe tissue damage. Paracetamol is the most extensively studied drug for its ability to induce intrinsic **Drug-Induced Liver Injury.**

Moreover, alterations in Mitochondrial Permeability Transition, can lead to disruptions in cellular energy Homeostasis.

Mitochondrial Permeability Transition plays a critical role in regulating cell death pathways, including both apoptosis and necrosis.

In apoptotic cell death, Mitochondrial Permeability Transition is associated with the release of cytochrome c and the activation of downstream caspases.

However, under conditions of severe oxidative or Toxic stress, sustained Mitochondrial Permeability Transition can lead to necrotic cell death due to Adenosine Triphosphate (ATP) depletion and membrane rupture.

Managing Drug-Induced Liver Injury involves a multifaceted approach, and Non-Pharmacological Strategies Play A Crucial Role." - in "Insights Into Medication-Induced Liver Injury: Understanding and management strategies", Toxicology Reports, 1 March 2025.

Concerning the Treatment of Acidosis

1. First, there must be given Bicarbonate of Soda with water 1 tea spoon per 250 ml of water 3 times a day.

2. Second, there should be a change in the Diet.

3. Third, Enemas should be performed 3 days after the administration of the Bicarbonate of Soda, and the change to a correct diet. (WARNING: Don't give Colonic Irrigation to individuals with Acidosis)

"Acidosis (acidemia): increased acidity in the blood and other body tissues. Healthy human-arterial blood pH varies between 7.35 and 7.45. Acidosis occurs when arterial pH falls below 7.35, while its counterpart (alkalosis) occurs at a pH over 7.45. **No Colonic Irrigation, No Large Enemas. Only small enemas."** - See: "Treatment of Acute Intestinal Intoxication based upon clinical findings in the colon", New England Journal of Medicine, 17 September 1931.

Concerning the So-Called Medical Trade Field of Psychiatry

The thought that prevails in individuals, is that others are slightly abnormal.

Thus, how can any individual judge another. Psychiatric Treatment Is Often More Damaging Than Helpful.

> ***"Psychiatric Diagnoses are not valid or useful. The use of Psychiatric Diagnosis Increases Stigma, Does Not Aid Treatment Decisions, is Associated with Worsening Long-Term Prognosis for Mental Health Problems, and imposes Western beliefs about Mental Distress on other cultures."*** *- in* ***"No More Psychiatric Labels: Why formal Psychiatric Diagnostic Systems Should be Abolished",*** *International Journal of Clinical and Health Psychology, December 2014.*

> ***"When it comes to Mental Illness, there are more people getting more treatment than ever, yet Death and Disability Continue to Rise."*** *- Dr Thomas Insel, MD, Director of the National Institute of Mental Health 2002-2015, in "Healing: Our Path From Mental Illness to Mental Health", February 2022.*

> ***"In spite of the Limited Value for Science of direct introspection****, our mental life is part of the real world, and is that part which is of the greatest concern to each of us.* ***It may be, as has been suggested, that Psychology Lost Its Soul Long Ago, and is now Losing Its Mind."*** *- Prof. J. McKeen Cattell, in "Aptitude and Achievement", Nature, 16 January 1926.*

The Problems of Medical Trade Pharmaceutical Drugs

"Antipsychotics are often prescribed against the person's will." - in "An Open Letter to NICE in the UK", International Institute for Psychiatric Drug Withdrawal, 29 March 2021.

"Public Health England analysis shows that, in 2017 to 2018, 11.5 Million Adults in England (26% of the Adult Population); received, and had dispensed, one or more prescriptions for any of the medicines within the scope of the review.The totals for each medicine were:

1. **Antidepressants; 7.3 Million People: 17% of the Adult Population.**
2. **Opioid pain Medicines; 5.6 Million People: 13% of the Adult Population.**
3. **Gabapentinoids; 1.5 Million People: 3% of the Adult Population.**
4. **Benzodiazepines; 1.4 Million People: 3% of the Adult Population.**
5. **Z-Drugs; 1.0 Million People: 2% of the Adult Population.**

" - in "Dependence and withdrawal associated with some prescribed medicines", Public Health England, December 2020.

"Antipsychotic withdrawal has been repeatedly described in the scientific literature since the 1970's." - in "An Open Letter to NICE in the UK", International Institute for Psychiatric Drug Withdrawal, 29 March 2021.

"Antipsychotics Induce Long-Lasting Changes; to Nerve Cells in the Brain, and they Need To Be Withdrawn Very Slowly; And in a Particular Way; to allow time for the Brain To Re-Set." *- David Taylor, Professor of Psychopharmacology, King's College London, in "New paper on how to stop antipsychotic drugs deemed 'historic breakthrough' (A Method for Tapering Antipsychotic Treatment That May Minimize the Risk of Relapse)", Metro, 23 March 2021.*

"Patients suddenly stop the medication by themselves with the result that they relapse. Much better that psychiatrists become expert in when and how to advise their patients to Slowly Reduce Their Antipsychotic." - Sir Robin Murray, Professor of Psychiatric Research, Institute of Psychiatry, Psychology and Neuroscience, in "New paper on How To Stop Antipsychotic Drugs deemed 'historic breakthrough' (A Method for Tapering Antipsychotic Treatment That May Minimize the Risk of Relapse)", Metro, 23 March 2021.

"Withdrawal symptoms appear to occur frequently after abrupt discontinuation of an oral antipsychotic. A weighted average of 53% individuals showed withdrawal symptoms after abrupt antipsychotic discontinuation and placebo substitution." - in "Antipsychotic Withdrawal Symptoms: a systematic review and meta-analysis", Frontiers in Psychiatry, 29 September 2020.

> ***"51% Described Their Withdrawal Effects As Severe." - in "Positive and Negative Effects of Antipsychotic Medication: an international online survey of 832 recipients", Current Drug Safety, March 2019.***

"There is converging evidence that suggests that adaptations to Antipsychotic exposure can persist for months or years after stopping the medication.

Some patients may prefer to taper at 10% or less of their most recent dose each month.

This process might allow underlying adaptations time to resolve, possibly reducing the risk of relapse on discontinuation.

Final doses before complete cessation may need to be as small as 1/40th a therapeutic dose to prevent a large decrease in D2 blockade when stopped.

At a minimum, it should be recognized that tapering periods of weeks down to minimum or half-minimum therapeutic doses of medication are likely to be inadequate to avoid withdrawal symptoms, including early relapse.

In those who have received Antipsychotics over prolonged periods, tapering regimes over months, and years down to small portions of Drug doses are more likely to be effective." - in "A Method for Tapering Antipsychotic Treatment That May Minimize the Risk of Relapse", Schizophrenia Bulletin, July 2021.

> ***"Only around 50% of people Prescribed Antipsychotics in the UK have a psychotic condition." - "Prescribing of antipsychotics in UK primary care", BMJ Open, 2014.***

"Drug Withdrawal Delays Are Causing Avoidable Deaths. Investigation finds Regulators should consider early suspensions whenever deaths are suspected of being due to Adverse Drug Reactions: "Delays in the post-marketing Withdrawal of Drugs to which Deaths Have Been Attributed: A systematic investigation and analysis", BMC Medicine, 5 February 2015. Of the 407 Medicines withdrawn from the market; 95 Drugs were identified for which Death was specifically documented as a reason for market withdrawal. Most of the Drugs were for treating Neurological, or Psychiatric Disorders, followed by Painkillers, and Anti-Inflammatory Drugs. "The interval between the first report of a Death Attributed to a Medicinal Product, and eventual withdrawal of the product has not improved over the last 60 years (since 1957)", averaging 4 years"." - in "Drug Withdrawal Delays Are Causing Avoidable Deaths, investigation finds", The Pharmaceutical Journal , 9 February 2015.

Publications To Read

1. "Harm Reduction Guide to Coming Off Psychiatric Drugs", 2007.

2. "Your Drug May Be Your Problem, How and Why to Stop Taking Psychiatric Medications", 2007.

3. "Coming off Psychiatric Drug", 2013.

4. "Psychiatric Drug Withdrawal A Guide for Prescribers, Therapists, Patients, and Their Families", 2013.

"How To?

1. "Discontinuing Psychotropic Drugs? And if so, how?"; Page 438; "Withdrawal from Prescribed Psychotropic Drugs", 2023.

2. "Making Psychiatric Drug withdrawal as safe as possible"; Page 452; "Withdrawal from Prescribed Psychotropic Drugs", 2023.

3. "Using the Wellness Recovery Action Plan to withdraw from psychiatric medications"; Page 469; "Withdrawal from Prescribed Psychotropic Drugs", 2023.

Every Man Is Presumed To Be Sane

"The following questions of law were propounded to the judges by the Lord Chancellor on the part of the House of Lords.

The jury ought to be told in all cases that every man is to be presumed to be sane, and to possess a sufficient degree of reason to be responsible; until the contrary be proved to their satisfaction." - in "Opinions of the English Judges in Regard to the Law", Rules in McNaghten's Case, 1848.

Insanity is a Bodily Disease; A Morbid Action of the Brain

> ***"Insanity, as far as we have the means of perceiving, is a Bodily Disease; in other words, its visible and Invariable Condition is a Morbid Action of the Brain, Either Structural or Functional. If it be true, and no physician denies it, that to diseases of the inflammatory class it is impossible to prescribe limits, or to predict that new and aggravated symptoms shall not suddenly follow in the course of the diseased action, is it not presuming too much to decide, that Inflammation of the Brain, the usual cause of Insanity, has known boundaries, and shall not suddenly extend from partial to produce total insanity?"*** *- in " Edinburgh Law Journal", Vol. I, 1832.*

"Notwithstanding the vast and obvious importance of the study, it is but within a very recent period, that any enlightened approach has been made to sound pathological views of the condition of the brain and nervous system during this melancholy inroad upon its recognised functions. It must be admitted, that our knowledge of the mind, in its healthy as well as its disordered state, is but in its infancy. How far better at once to admit our ignorance, than by an arrogant assumption of knowledge to peril the life of a fellow creature, and retard the progress of scientific investigation. That we know little or nothing of the nature of that peculiar change which the mind undergoes when in a state of derangement, all men of candour and experience must admit. Let those who feel sceptical on this point, only visit any of our large public or private lunatic asylums. In traversing their wards, how humiliating must be our reflections? how bitterly must we deplore the imperfections of our art? Here, we behold thousands of the human species, shut out, perhaps for ever, from all intercourse with human kind; severed from those most nearly and tenderly allied to them; deprived of all social and civil rights; compelled day and night to herd with individuals reduced to their own sad and melancholy condition. The questions frequently asked by those not aware of the limited nature of our knowledge, are: "Can nothing be done for these poor creatures?" - Dr Forbes Winslow, MD, Doctor of Civil Law, British Psychiatrist, in "On The Incubation of Insanity", 1846.

What Is Insanity?

"It should not be a matter of surprise that no satisfactory definition of it has ever been formulated, or that each person's answer to this question should be unlike that given by any one else.

There are many people who occupy a position in studying insanity which would compel them, were they to transfer their logic to corporeal conditions, to deny the existence of bodily disease.

There would either be complete health or death.

No Function Could For Them Be Disordered; It Must Be Annihilated.

There would be Either Normal Life or No Life, for they recognise no Mental Disorder unless all indications of mind are wanting.

To Them Insanity Is Dementia.

The prince who failed to make all his clocks mark the same hour of the day at the same time, and thence reasoned that he could not make all his subjects think alike, was a philosopher; the man who holds up the apparent want of agreement in definitions of insanity as a necessary sign of ignorance is a bigot.

Approaching the answer to the question:

What Is Insanity?

I refer to the obvious fact that the term insanity is one of a large but diminishing class of words in catalogues of diseases, which Do Not Stand For Diseases At All, but Only for Certain Combinations of Symptoms.

It is in this aspect analogous to; Dyspnea, Dyspepsia, Dropsy.

Dyspepsia is a symptom of all the various ailments which attack the stomach, and we cannot conceive of a disease in this part of the body sufficiently grave to attract attention unaccompanied by some trouble of digestion.

Whether there be: Ulcer, Cancer, Dilatation or Atrophy of its coats, Simple Catarrh, Gastritis, Faulty Secretion, Deficiency or Impairment of the nerve or blood supply, or any other Defect or Impairment, the Work of the Stomach Must Be Interfered With, and this result of the affection, Which Often Throws Other Symptoms Into The Shade, is Dyspepsia (Indigestion).

Operations of the Mind can show themselves only through a material instrument or organ, and this is furnished by certain portions of the brain.

When these are developed, matured, free from disease, and supplied with blood and other conditions of health, mental phenomena are normal, the mind is sound. The "Mens Sana" (Healthy Mind) can exist because the "Corpus Sanum" (Healthy Body) exists.

Mens Sana in Corpore Sano

> *"You should pray for a healthy mind in a healthy body. Ask for a stout heart that has no fear of death, and deems length of days the least of Nature's gifts that can endure any kind of toil, For assuredly, the only road to a life of peace is virtue." - Juvenal, Roman Poet , list of what is desirable in life, in "Satire X" (10.356), c.2nd century AD.*

That the record of sense perception, judgement, feeling, will power, conscience, memory, may exist, or be exercised normally, These Central Nerve Organs Must Be Healthy. Their diseased state implies disorder in some or all the mental phenomena. What Is Insanity? or; What condition is the cause of those symptoms which are called insanity?

In the widest sense: Any Bodily Defect or Disease which Interferes With The Mental Operations.

No Mind In Its Workings Is Perfect, Any More Than That Any Body In All Its Functions Is Perfect; but imperfection in the one is not necessarily disease, nor is it in the other necessarily insanity. In The Ignorance of the condition of the purely Nervous Constituent of the Brain, Which Is At The Foundation of Unhealthy Mental Operations, and of the manner in which This Condition Is Influenced By Diseased States of the Non-Nervous Constituents, we may safely assume that The Same Abnormal Processes of Circulation, Nutrition, Absorption, Innervation, and Growth Which Interfere With Normal Function In Other Parts of the Body, Operate In The Brain, and that The Same Laws, in many respects, Hold Sway Both Without And Within The Cranium.

There Is No Defined Line Between Mental Soundness and Unsoundness

There Is No Sharp, or Well-Defined Boundary Line Between Mental Soundness and Unsoundness, any more than there is between Health and Disease generally.

It is only by a Comprehensive Survey of The Whole Life, or a considerable portion of it, that we are able to estimate correctly the nature of any of its small fragments. To Take Any One Act of the Life Dissociated From Every Other, And To Ask Is That A Sane Or An Insane Act, Is Futile." - Dr S. S. Schultz, MD, in "Address in Mental Disorders; Analogies Between Insanity and Other Diseases", Transactions Medical Society of the State of Pennsylvania, 1885.

Ostentatious Display of Medical Lore

"The mind may exhibit no deviation from health, yet the feelings or effective powers may be greatly disordered.

Concerning "Medical Experts"

I would say a few words Respecting the Examination of Medical Witnesses.

He should, when called upon to give evidence in cases of insanity, never forget that he has nothing to do with the legal definition of the term.

No Medical Man is Competent

No Medical Man is competent, in every case, to say, whether the party, supposed to be deranged, is or is not competent to draw a line of distinction between good and evil, right and wrong. The legitimate point which the Medical Witness has to decide is this: Had the alleged lunatic, at the time he committed the offence, sufficient control over his actions? It is absurd to believe that any amount of Medical Information, or metaphysical knowledge, which the witness may be in possession of, will enable him to form anything like an accurate notion of the lunatic's capability of distinguishing between right and wrong.

The Medical Men Should Avoid Defining Insanity

Above all things, the Medical Man should avoid defining insanity.

Counsel, knowing the obscurity of the subject, and conscious of the difficulties with which Medical Men have to contend in arriving at a correct opinion, most unfairly, in their examination, endeavour to tie them down to definitions; and then, by showing their fallacy, weaken the whole effect of their testimony. As I have formerly observed, there is nothing so easily seized upon as a definition; therefore the witness should be cautious in committing himself by attempting to define insanity. It will be better and wiser for him at once to acknowledge his incapacity to do so, than by a vain and ostentatious display of

metaphysical lore, to peril the life of a fellow creature." - Dr Forbes Winslow, MD, Doctor of Civil Law, British Psychiatrist, FRCP, MRCP, MRCS, in 1847 opened 2 private Lunatic Asylums at Hammersmith, where he employed Humane Methods of Treatment, in "The Plea of Insanity in Criminal Cases", 1843.

Who is to Judge One Another?

Not the Medical Trade for Sure!!!

And definitely not the So-Called Psychiatric; for this are the Most Nefarious Sect in the Medical Trade

> ***"Judge not, that ye be not judged. For with what judgement ye judge, ye shall be judged; and with what measure ye mete, it shall be measured to you again. And why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye? Or how wilt thou say to thy brother, Let me pull out the mote out of thine eye; and, behold, a beam is in thine own eye? Thou Hypocrite, first cast out the beam out of thine own eye; and then shalt thou see clearly to cast out the mote out of thy brother's eye."*** *- Matthew 7:1-5*

1 in 5 Americans On Psychiatric Drug Medication

Approximately 1 in 5 Americans (roughly 20%) takes Psychiatric Drug Medication daily, with some data indicating the figure could be as high as 22-23%. With Antidepressants being the most commonly prescribed class. About 16.6% of American adults currently taking them. Stimulants and Benzodiazepines also contribute significantly to the total.

Medical Trade Poisonous Synthetic Pharmaceutical Psychiatric Medication

> ***"In California law; a person can be involuntarily committed for periods of 72 hours to 14 days. While Detained, the person is Frequently Medicated, often by Forcible Injection. Drugs Substitute for Restraints. Commonly prescribed Anti-Psychotic Medications, including: Thorazine, Haldol, Mellaril, Stelazine and Prolixin, are most commonly used to treat chronic schizophrenia. These Drugs have come under increasing attack, because of Side Effects including: Drowsiness, Restlessness, Blurred Vision, and Irreversible Involuntary Movement of Facial Muscles; known as Tardive Dyskinesia."*** *- in "Court Rules Mental Patients May Reject Forced Drugging", The New York Times, 22 December 1987.*

The Case of Eleanor Riese

Eleanor Riese (1943 –1991) sued a Hospital for her right to refuse Antipsychotic Medication. In 1985, Riese led a class-action lawsuit against the St. Mary's Hospital in San Francisco. Her lawyer argued that during her stay there Riese **developed Symptoms Caused by Antipsychotic Medication she did not consent to.** In 1987, California Court of Appeals in a unanimous ruling about Riese v. St. Mary's Hospital and Medical Center suit decided that **Antipsychotic Medications: "May not be prescribed to involuntarily committed mental patients in non-emergency situations without their informed consent."**

Lanterman–Petris–Short Act

Under the Lanterman–Petris–Short Act, Individuals Can Be Detained into a Locked Psychiatric Facility in the following process:

Individuals can be Detained and Lockdown

The "5150 Hold": Under California Welfare and Institutions Code (WIC) 5150, an individual can be involuntarily placed in a locked psychiatric facility for an evaluation for up to 72 hours. Over the next 72 hours, the hospital or psychiatrist must determine the individual's need **for Further Locked Psychiatric Detainment.**

If, however, they remain a danger to others or themselves or continue to be gravely disabled, **the hospital / psychiatrist may then request a "5250 Hold" to thereby keep the individual in the hospital beyond the 72-hour limit of the "5150 Hold."**

> ***"To place an individual on a 5150. This is the Lanterman-Petris-Short Act, 72-hour hold that sends a person into a locked psychiatric unit for up to 72 hours. The emotional impact affects the individual who is going to be placed on the 72-hour hold, and their family. I also and unfortunately found that several other clinicians used this powerful tool in ways that I would not have. The 72-hour hold, for example, can be used as a threat against someone who is perceived as non-compliant. The language of the 72-hour hold speaks volumes about the emotions and thoughts that it generates. The terms and phrases are negative and linked to the criminal domain; "detained," "mental health disorder," "court hearing," "custody," " psychiatric evaluation," and "you may make a phone call." They are also probably hungry, possibly in physical pain, and most probably alone. He or she has been brought in by police, and now another person is in an authoritative position telling them that they are going to be "detained" due to their "mental disorder" for a period of 72 hours, and sent to a "facility" for a psychiatric evaluation."*** *- in "When There's No Place Like Home", Mad in America, 18 September 2015.*

"Eleanor Riese attorney, Colette Hughes said she agrees: **"I interviewed dozens of patients from St. Mary's, and their stories were strikingly similar to Eleanor Riese's story",** she said. Riese's story, as told in court papers, provides a disturbing glimpse of life on a psychiatric ward before the landmark court decision. A cooperative patient with a history of Schizophrenia **Riese followed her Psychiatrist's Advice, And Took A Variety of Powerful Antipsychotic Drugs, including Mellaril, Cogent in and Moban, But she soon Began Suffering Severe Side Effects from them. "They Make Me Suffer Miserable Physical, and Emotional Side Effects", her declaration states including: Dizziness, Blurred Vision, Tremors, and the Inability to Walk, or even Raise her Eyelids. Riese's complaints to staff, however were met with even more Drugs, as the Psychiatrist doubled her dosage. On one occasion, she was drugged simply for being "loud and sarcastic",** Riese's court brief noted. **"The Drugs were undoubtedly being used as chemical restraint, not treatment",** it said.

When she finally refused to take the additional dosage, her real troubles began. Powerful tranquilizers called Neuroleptics, like the widely-used Thorazine, Mellaril and Haldol, can cause Tardive Dyskinesia, a Movement Disorder consisting of Facial Grimacing, Blinking, and Jerking Motions, in about 15% to 20% of patients, medical journals report. Moreover, **these Drugs can also produce Neuroleptic Malignant Syndrome, which kills 200 patients in California each year.** "Basically what is happening now in the city and across the state is that if you don't medicate your patients, MediCal will decertify them in a second and you won't get paid", said Ghannam. **"So there are powerful economic reasons to medicate patients.** That's one reason psychiatric associations are against Riese. **With Psychiatrists judging the competency, it's like the Wolf guarding the Chicken House",** said Ghannam. **"Psychiatrists are economically and politically tied to medicating patients. What we'll see is a large number of competent patients being forcibly medicated with their constitutional rights squashed"."** - in "The Assault on Patients Rights", The San Francisco Bay Guardian, 4 July 1990.

> ***"Given their lack of benefit, I estimate we could stop almost all psychotropic drugs without causing harm."*** *- Dr Peter Gøtzsche, MD, in "Psychiatric drugs do more harm than good, says expert", The Guardian, 12 May 2015.*

> ***"Psychiatric Drugs the main treatments used in psychiatric medical practice, are rough on the body. Psychiatric Chemicals do not Detox easily, the Kidneys and Adrenals are further weakened by the stress of having to work so hard to detoxify them and the digestive system is vulnerable to getting sluggish. Psychiatric Drugs, have been shown to harm the body. They have been thoroughly researched by their own funding and have still been found to cause extreme harm."*** *- in "Why Mainstream Psychiatry is Ableist", Mad in America, 28 August 2018.*

> ***"The way we care for people with mental health problems is creating a hidden human rights emergency and he proposes a new vision for the future of health organisations across the globe. Our Mental Health and wellbeing depend largely on the society we live in; and on the things that happen to us; and on how we learn to make sense of; and how we respond to these events. We need a rejection of invalid diagnostic labels, practical help rather than medication, and a recognition that distress is usually an understandable human-response to life's challenges."*** *- in "A Manifesto for Mental Health; Why We Need a Revolution in Mental Health Care", 2019.*

The UK Mental Health Act
The Imprisonment by The Medical Trade With Forced Mediation

"You've probably heard of being "sectioned", whereby people with mental health problems are involuntarily hospitalised under the Mental Health Act. But you may not have heard of Community Treatment Orders, a younger cousin of involuntary hospitalisation. Community Treatment Orders provide a legal means through which people with severe mental illness can be made to accept treatment while living outside of hospital. Despite a lack of evidence for their effectiveness, they are still widely used. Nearly 5,000 people are placed on Community Treatment Orders in England each year. First introduced in the US in the early 1970s, Community Treatment Orders now exist in dozens of countries including Australia, New Zealand, Canada and the UK. They came into effect in England and Wales in 2008. The idea is that once the person leaves hospital, the Community Treatment Order will encourage them to engage with health services and take their Medication. Community Treatment Orders allow certain obligations or "conditions" to be placed on the patient, for example, to live at a certain address. If the conditions are not met, and their doctor believes they are becoming unwell, then the patient can be recalled to hospital for an assessment. Because of the legal powers of Community Treatment Orders, a patient who refuses assessment can be Forcibly brought to Hospital by the Police. Three randomised controlled trials have found no support for Community Treatment Orders in their main outcomes, including readmission to hospital, clinical symptoms, and service use." - in " UK still using Ineffective Compulsory Treatment for people with mental illness", The Conversation, 25 May 2016

Forced Treatment Without Consent for 6 Months under Mental Health Act

"Vulnerable people sectioned under the Mental Health Act Are Being Subjected to Medical Treatment Without Consent, and are not protected by effective legal safeguards, the Law Society has Warned. Initial powers to hold patients for up to 6 months may Breach Their Human Rights. Separate provisions under the 1983 Act that permit doctors to Enforce Treatment Without Consent in the first 3 months of a Patient's Detention Should Be Abolished, the Law Society argues." - in "Law Society Urges End to Enforced Medical Treatment of Vulnerable People", The Guardian, 22 January 2018.

The Mental Health Act; The Precursor to Lockdowns & Medical Trade Tyranny

The Road Map to Medical Trade Tyranny:
1. Mental Health Act, 1983.
2. Children Act, 1989.
3. Mental Capacity Act, 2005.
4. Coronavirus Act, 2020.

The "Mental Health Act 1983" in the United Kingdom, laid the Foundations for Medical Trade Tyranny; this Along with the "Mental Capacity Act 2005", was followed by the "Coronavirus Act 2020", where the legal precursor to the Lockdowns in the United Kingdom that started in March 2020. These 3 Acts provided the established legal framework for Medical Trade Coercion, Harassment, and Depriving Individuals of Liberty in so-called "Health Crises", these so-called "Laws" where subsequently used to Lockdown and to Coerce Populations into Submission to: Medical Trade Testing, Medication, and Vaccination, during 3 years, from 2020 to 2022, the Fake "Covid-19" "Pandemic" Circus, destroying lives and livelihoods. They Want More Powers to Detain:

"The Mental Health Act 1983 may be applied to people of all ages, including children and young people. Section 136 of the Mental Health Act (United Kingdom) overlaps with the powers contained in the Children Act 1989 (section 46 – PPOs). For example, Detention Under the Mental Health Act 1983 is primarily **because a young person "is" "mentally ill" and "needs" "Hospital Treatment"**, while **Detention under the Children Act** is appropriate when care and control is because of disturbed behaviour.

However, it is not always obvious whether children who are behaviourally disturbed are suffering from a mental disorder.

The Mental Health Act 1983 and the Children Act 1989 Have Provisions for Longer Periods of Deprivation of Liberty where a young person's care or mental health needs require this for safety.

Section 45A of the Mental Health Act, 1983 allows for a sentence of Imprisonment to be coupled with an Immediate Direction to Hospital, rather than a hospital order because a person's mental disorder is considered sufficiently severe to require hospital care. However, the **offender-patient would be Redirected To Prison** when sufficient recovery has judged to have been achieved. **The numbers of such orders have been rising.**

Proposals – Reforms to Part III

Patient transfer to a lower level of hospital security − the range of options open to a Mental Health Tribunal should be extended so that where appropriate, in addition to their current ability to order a conditional discharge, they could also transfer patients to a lower level of security." - in "Review of the Mental Health Act 1983", Royal College of Psychiatrists, February 2018.

Psychiatrists Have Higher Incidence of Mood Disorders

"Physicians have Long Been Known to Have Significant Rates of Suicide.

The most common underlying Psychiatric Illnesses are Mood Disorders, Substance Use Disorders, Dual Diagnoses (co-occurring disorders, when a person experiences a mental health condition (such as: Depression, Anxiety, Post-Traumatic Stress Disorder, Schizophrenia; alongside a substance abuse problem simultaneously), and Personality Traits, and Disorders: Borderline, Narcissistic, Antisocial.

Psychiatry is one of the vulnerable branches of medicine. For some observers, this is a paradox; wouldn't specialists in diseases of the mind be able to recognise illness in themselves, and seek appropriate treatment?

Others who have always deemed Psychiatrists "Unstable" and "Less Than", suicide is no surprise at all. Psychiatrists have a Higher Incidence of Mood Disorders; than those in other branches of medicine." - in "When Psychiatrists Die by Suicide", Journal of Clinical Psychiatry, November 2010.

The Mentally Ill "Treating" The Mentally Well

"Between 2003 and 2018, 159 cases of Psychologist Death by Suicide were identified in the "National Violent Death Reporting System."

Psychiatrists had the Highest Rate based on the extrapolated estimate of 16 Suicides. Non-Psychiatric Physicians had the second highest rate based on an extrapolated estimate of 146 Physician Suicides, followed closely by Dentists.

Over 50% the Psychologists whose Suicides were captured by the "National Violent Death Reporting System" **were identified as having Mental Health Problems.**

The Most Common Diagnoses were Depression or Dysthymia (42.8%), and Anxiety (11.9%).

Of the 50 males for **whom Mental Health Problems were identified, 36 (72%) were in Treatment when they Died.**

Among the 37 female **Psychologist decedents with Identified Mental Health Problems,** 33 (89%) **were being Treated at the time of Suicide."** - in "Suicides of Psychologists and other Health Professionals: National Violent Death Reporting System data, 2003-2018", Am. Psychol., May-Jun 2022.

Suicide by Nurses Within 12 Months
Of Mental Health Service Contact
The Majority Are Mental Health Nurses

> ***"The Office for National Statistics report the risk of Suicide for female Nurses to be 23% above the risk for women in other occupations. A detailed analysis of nurse suicides over an 11 year period (2011-2021) using the National Confidential Inquiry into Suicide and Safety in Mental Health database of people who died by suicide within 12 months of Mental Health Service Contact; 621 Nurses Died by Suicide, over the 12 year study period (2011-2022). Of these 438 (71%) were female, and 183 (29%) were male; 112 (18%) were recorded as Mental Health Nurses."*** *- in "Suicide by Nurses: Update report (2011-2022)", University of Manchester, 2024.*

1. The Prescription And Taking Psychiatric Poisonous Medication

> ***"Male Nurses were more likely than men in other occupations to be prescribed Selective Serotonin Reuptake Inhibitors, 71%, and Serotonin-Norepinephrine Reuptake Inhibitors, 52%, SSRIs, and SNRIs, are Antidepressants. Both "treat" Depression, and Anxiety, SNRIs are often used for Chronic Pain."*** *- in "Suicide by Nurses: Update report (2011-2022)", University of Manchester, 2024.*

2. Suicidal Ideation

Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)

"In 2018, the Arzneimittelsicherheit in der Psychiatrie (AMSP) program for Drug Safety in Psychiatry studied 219,635 patients from 1993 to 2014 to determine the correlation between Suicidal Ideation and Antidepressants, including Selective Serotonin Reuptake Inhibitors (SSRIs), Tricyclic Antidepressants (TCAs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), and Noradrenergic and Specific Serotonergic Antidepressants (NaSSAs).

There were 83 documented suicidal cases during the study; 44 cases of Suicidal Ideation, 34 attempted suicides, and 5 fatal suicides; with an incidence rate of 0.04%. Increased: Restlessness, Ego-Dystonic Thoughts or Urges, and Impulsivity Contributed To Suicidality. This Study Found a Association Between Antidepressant Use and Suicidal Ideation.

Selective Serotonin Reuptake Inhibitors (SSRIs)

"According to the Centers for Disease Control and Prevention, suicide is the 10th leading cause of death. Suicidal Ideation; is defined as thinking about suicide or taking one's own life, and Psychosocial Symptoms: Helplessness, Psychosis, Self-loathing, Paranoia, Emotional Pain, Mood swings, Personality changes, Anxiety; shows the warning signs of Suicidal Ideation.

Psychiatric illnesses, especially Major Depressive Disorder, are closely linked to suicide. Beginning in the 1950s, Tricyclic Antidepressants, including: Amitriptyline, Amoxapine, Desipramine (Norpramin), Doxepin, Imipramine (Tofranil), Nortriptyline (Pamelor), Protriptyline, Trimipramine, were the first line of treatment for Major Depressive Disorder.

Tricyclic Antidepressants were used widely until Selective Serotonin Reuptake Inhibitors were introduced on the market in 1982, and became first-line due to their direct action and more favourable side effect profile.

One of the most worrisome side effects of treatment with antidepressants, especially Selective Serotonin Reuptake Inhibitors, is new or worsening Suicidal Ideation." - in "Selective Serotonin Reuptake Inhibitors and Adverse Effects", Neurology International, 5 August 2021.

> ***"1 in 3 people who registered with a mental health service for NHS staff in 2024/25 had experienced suicidal thoughts or plans."*** *- in "Mental Health Service for NHS staff reveals scale of Suicidal Ideation", GP, 16 September 2025.*

> ***"New figures from our advice service show a 76% rise in staff seeking support for suicidal ideation in the first half of 2024, compared with the same period in 2023."*** *- in "New RCN report shows workplace issues are contributing to mental health crises", Royal College of Nursing, 8 February 2025.*

3. Knowledge About The Effects Psychiatric Medication

> ***"Knowledge about Medication Effects; may directly add to the Increased Suicide Risk in nurses."*** *- in "Suicide by Nurses (2011-2022)", University of Manchester, 2024.*

4. The Trigger: Adverse Life Events Within 3 Months of Death

> ***"Adverse life events within 3 months of death were common for all female patients. Between 2011-2021, 170 male Nurses Died by Suicide; 39 (34%) of these men who were in contact with Mental Health Services in the year before they died."*** *- in "Suicide by Nurses (2011-2022)", University of Manchester, 2024.*

5. The Number of Suicides In Metal Nurses Is Much Greater

> ***"We removed individuals from analysis where it was clear that they were not currently employed; 24% of people were excluded due to no occupation data being available."*** *- in "Suicide by Nurses (2011-2022)", University of Manchester, 2024.*

Psychiatry A Malevolent Entity

We have to agree with Fyodor Dostoevsky, a great novelists in world literature, when he wrote in his masterpiece: "The Brothers Karamazov"; acclaimed as one of the supreme achievements in world literature: "They Are Scum, Doctors and the Whole Medical Filth, Speaking in General, And of Course, In Detail. I Reject Medicine. It's a Useless Establishment", (Harold Bloom, Ed.1988). To which one should Add, in regards to the Medical Trade "Speciality" of Psychiatry, this being: The Culmination of the Whole Medical Filth; Psychiatry A True Malevolent And Nefarious Entity.

Several Medications Linked to Violent Acts

"Antidepressants Have Been Linked With Violent Behaviour. A Link Between Several Types of Psychotropic Medications and Violent Behaviour toward others has been documented. The Medications most strongly linked to Violent Behaviour were the smoking-cessation aid Varenicline, and **Antidepressants, Regardless of Class. Drugs Were Found to be Disproportionally Linked With Violence Cases. These Drugs included Varenicline, 11 Antidepressants, 3 Drugs for Attention-Deficit/Hyperactivity Disorder (ADHD), 5 Hypnotics/Sedatives."** - in "Several Medications Linked to Violent Acts", Psychiatric News, 4 February 2011.

The Utterly Useless And Dangerous Medical Trade

__"I have sworn upon the altar of God eternal hostility against every form of tyranny over the mind of man."__ - Thomas Jefferson, in "Letter to Dr Benjamin Rush, MD", 23 September 1800.

"I once met a medical student who had failed his first year exams. "It's OK", he said, as I tried to console him. __"I know I'm not very bright, but I can always be a Psychiatrist after Medical School."Two years later, after I had professed an interest in Psychiatry, a Doctor told me: "You know you are intelligent, right? You don't have to do that."__ - Psychiatry is a "non-medical" speciality for failures." - in "Psychiatry – a specialty for failures?", The BMJ Opinion, 28 June 2010.

__"Psychiatric Practice focuses on Prescribing Medication; Psychiatrists Have Become Primarily Pushers of Pills. Today, Psychiatry training focuses on Medicine. Like Jacob's brother Esau in the Old Testament: "We Have Sold Our Birthright For A Mess Of Pottage" (Genesis 25:34); and It Doesn't Feel Good. Why Is It Often Hurting, Not Helping, Patient Outcomes? the complicity between Psychiatry, and Drug Companies in Overprescribing. Do patients have any way of knowing when they're on the wrong end?"__ - in "Psychiatry in Trouble" Can It Be Fixed? Psychiatry's Questionable Trajectory", Psychology Today, 17 August 2021.

There Is No Informed Consent

"The idea of "Informed Consent", really is a centerpiece of Modern Medicine, coming out of World War II. And it's a legal obligation actually, and the idea of Informed Consent is the patient and needs to be given enough information to make a reasonable decision about whether they want to have the treatment.

In other words you need to know about the Risks and the benefits.

And it really is a Cornerstone of Modern Medical Care, and I would say that **Virtually No Patient, No Person who's been Prescribed a Psychiatric Drug has given Informed Consent in the last 35 years; because they haven't been informed of the Risks; they haven't been. If they have been given it, also often, A False Story about what the problem is, and what the Drug does.**

The "Chemical Imbalance" Story is just a violation, obviously, of Informed Consent, because you are told you have something wrong with you - this fixes it - and It's Not True.

The "Chemical Imbalance" Story, Has Fallen Apart; and some Psychiatrists have been asked: "Well why did you tell patients this?"

And Dr Daniel Carlat, MD, it's a Psychiatrist, in Massachusetts, gave an Honest Answer he said:

> ***"We don't really believe it's true, but no patient wants to think we don't know what we're doing. So it helps them think they wouldn't know what we're doing."***

Now, who has it helped them, and then another person said:

> ***"Well it's not really true, but you know, we want our patients to think the Drug will be helpful."***

These were like confessions of not doing Informed Consent, and the the reason for **Informed Consent is this; is that a person has autonomy; authority over their own being**; that is a fundamental right. Authority over your own being; to make decisions about you. Know your own health, what you want to happen, and think about this; **there is nothing more fundamental, than how your brain works.**

This is fundamental matter, who you are, who you are gonna be, how you are going to experience the world. So, **if there is any Medical moment that should be based on Informed Consent; it's around taking a Psychiatric Drug; And No One Has Been Given Informed Consent, for many years. I don't even think the average Psychiatrists or Doctor is capable of giving "Informed Consent"; because they really Don't Know the Actual data on benefits versus Risk."** - Robert Whitaker, Journalist, founder and publisher of Mad in America, in "There is No Informed Consent in Psychiatry", Medicating Normal ("Medicating Normal" is the untold story of what can happen when profit-driven medicine intersects with human beings in distress), 22 January 2020.

Medical Trade Fraud the Infamous Serotonin Hypothesis

"Robert Whitaker at Mad in America is calling for a class-action Lawsuit Against the American Psychiatric Association & Scientific Advisory Boards of Organizations, such as National Alliance on Mental Illness, alleging that the Infamous Serotonin Hypothesis paper; reveals these entities engaged in "Medical Fraud". We found that out of the 4,041 patients initially started on the Selective Serotonin Reuptake Inhibitor, Citalopram in the STAR*D study, and after 4 trials, only 108 patients had a remission, and did not either have a relapse and/or dropped out by the end of 12 Months of continuing care. **In other words, if you're trying to look at sustained benefit, you're only looking at 2.7%.**

Psychiatry cannot be expected to reform its ways.

When push comes to shove, even those who would seek to reform the profession cannot confront the reality that exists in the research literature, which is so **Out Of Sync** with the profession's pronouncements to the public, and with their own understanding of the merits of their therapies.

So what is our society going to do? **Our society needs to organize its thinking, and care around the "Narrative of Science"** that exists in the research literature.

It is a matter of great public health importance, and at this point, the only way that I can see this happening is through the lever of the law. The Law Requires a Medical profession to provide patients with "Informed Consent." If that standard is applied, then the societal narrative will dramatically change." - in "Holy Shit!" Psychiatry's Cognitive Dissonance on Display", 20 August 2022.

The Nonsensical Medical Trade Lie: That Mental Illness Caused by "Chemical Imbalances" In The Brain Is Not Empirically Substantiated

The Serotonin Hypothesis (Serotonin Theory of Depression) is a Theory suggesting that Depression is primarily caused by low levels of serotonin, or a chemical imbalance in the brain. This Theory was used to support the use of Selective Serotonin Reuptake Inhibitors (SSRI) Antidepressants, though modern reviews show No Consistent Evidence of This Link. Selective Serotonin Reuptake Inhibitors (SSRIs) are a class of Medication widely used to treat moderate to Severe Depression, Anxiety Disorders, and other Mental Health Conditions.

They increase Serotonin levels in the brain; a Neurotransmitter that "regulates" mood. Common SSRIs include Sertraline, Citalopram, Fluoxetine (Prozac).

> ***"It now seems beyond question that the traditional account of Depression as a Chemical Imbalance in the Brain Is Simply Wrong."*** *- Professor Irving Kirsch, Lecturer in Medicine, Harvard Medical School, in "The Emperor's New Drugs: Exploding the Antidepressant Myth", 2009.*

Depression Not Caused by Abnormalities in Brain Chemicals

"The idea that Depression is the result of abnormalities in brain chemicals, particularly Serotonin (5-hydroxytryptamine or 5-HT), has been influential for decades, and provides an important justification for the use of antidepressants.

Surveys suggest that **80% or more of the general public now believe it is established that Depression Is Caused by a "Chemical Imbalance."**

Many general practitioners also subscribe to this view.

It is often assumed that the effects of Antidepressants demonstrate that depression must be at least partially caused by a brain-based chemical abnormality, and that the apparent efficacy of SSRIs shows that serotonin is implicated.

The major strands of research on Serotonin, shows; There Is No Evidence That Depression Is Associated with, or Caused by, Lower Serotonin concentrations or activity.

Most Studies Found No Evidence of Reduced Serotonin activity in people with Depression. Methods to reduce Serotonin availability; using tryptophan depletion; Do Not Lower Mood in Volunteers.

The “Chemical Imbalance” Theory of Depression is still put forward by professionals, and the Serotonin Theory, in particular, has formed the basis of a considerable research effort over the last few decades.

The general public widely believes that Depression has been convincingly demonstrated to be the result of Serotonin, or other Chemical Abnormalities.

The idea that Depression is the result of a Chemical Imbalance, also influences decisions about whether to take or continue Antidepressant Medication, and may discourage people from discontinuing treatment, potentially Leading To Lifelong Dependence on these Drugs.

The Serotonin Theory Has Not Produced Convincing Evidence of a Biochemical Basis to Depression. This is consistent with research on many other biological markers. We suggest it is time to acknowledge that The Serotonin Theory of Depression is not empirically substantiated.” - in “The Serotonin Theory of Depression: A systematic umbrella review of the evidence”, Molecular Psychiatry, 2023.

> ***“Psychiatry Is An Emperor Standing Naked, in his new clothes. To tell an emperor that he does not have any clothes on has never been advocated as the best way to win friends. The alternative, is equally painful, for you must then become part of the general delusion.”*** *- Dr E. Fuller Torrey, MD, in “The Death of Psychiatry”, 1974.*

Manipulative Behaviour of the Medical TradeCoercion, Threatening and Force of Authority

“By Coercion is meant any action, or Threat of action, which compels the patient to behave in a manner inconsistent with his own wishes.

The compelling aspect can be direct Physical or Chemical Restraint, or it can be indirect Threatened Recriminations or indirect “Force of Authority” which “convinces” the patient that No Other Legal; or Medical Alternative is available to him.

Coercive Behaviour falls into the general category of Manipulative Behaviour, in which one person feels that his actions are determined by someone else, despite his own wishes. Voluntary patients can be Held for 15 Days Against Their Will, at which time they may be required to give 10 Days notice before leaving the hospital (Chapter 27, Mental Hygiene Law, in the consolidated laws of New York State, available in 1962).

The Medical Trade Use of Coercion

If the Physician Decides to use Coercion, three basic methods are available to him:

1. Restriction of Liberty
2. Certification to a Larger Hospital
3. Treatment with Electroconvulsive Therapy and Large Doses of Medication

Each of these can be Coercive when used as Threats, as Direct Constraints, or as Punishments. Despite the absence of locked doors, control over the patient's physical liberty remains the most frequent Means of Coercion. The physician may limit the patient's freedom to move around the hospital, he may refuse weekend passes, or he may insist that the patient remain in the hospital for the full 25 days stipulated in the voluntary admission form. In many instances, nearly every therapeutic hour with a hospitalized patient will revolve around direct or indirect bargaining for increased liberties with improved behaviour.

For example: The patient may request a pass to leave the ward, and the physician may respond that the patient's behaviour still lacks sufficient self-control. No matter what the Therapist's Attitude, the Coerciveness of the implication cannot be avoided if the patient does not change his behaviour, He Will Not Be Given More Freedom.

The 3rd Means of Coercion is Threatened; or Actual Treatment with Drugs or Electroconvulsive “Therapy.” Many patients will bargain to diminish their Drug Doses, much as they will bargain to decrease their Physical Restrictions.

Many dislike the Associated Side-Effects of Phenothiazines (Antipsychotic Drug Pharmaceuticals):

1. Dryness of the mouth.
2. Chapped Lips.
3. Blurred Vision.
4. Stuffy Nose.
5. Gastrointestinal Symptoms.
6. More Disturbing Changes in Motor Control; and affect which almost invariably accompany larger doses.

The Use of Drugs is Entirely the Prerogative of the Physician.” - Dr Peter Roger Breggin, MD, in “Coercion of Voluntary Patients in an Open Hospital”, Archives of General Psychiatry, February 1964.

Psychiatry Is Largely Worthless And Fraudulent

*"**Many Psychiatrists have had, at least to some degree, the unsettling and bewildering feeling that what they have been doing has been Largely Worthless and that the premises on which they have based their professional lives were Fraudulent.**" - Dr E. Fuller Torrey, MD, in "The Death of Psychiatry", 1974.*

Psychiatry Devastating Impact of Its Treatments Upon Minds and Brains of Patients

*"**Psychiatry; Devastating Impact of its treatments Upon the Minds and Brains of Patients. The Personal, subjective Response of the Patient is almost Wholly Ignored in the Psychiatric Literature. Meanwhile, in Clinics and Hospitals, the Psychiatric Patient Is Subjected to a Variety of Threats and Controls, from the simple Authority of the Physician, to the more Concrete Menace of Involuntary Drugging, Electroshock and Incarceration.**" - Dr Peter Roger Breggin, MD, Psychiatrist, in "Ethics of Psychiatry", 1997.*

Psychiatry Delusional System Fatal For Patients

*"**Over 90% of Medication Prescriptions for Psychiatric inpatients have No Scientific Basis. Psychiatrists get Brainwashed into a group Delusional System that controls how they understand mental illness, and treat patients. This Delusional System Is Bad For Patients.**" - Dr Colin A. Ross, MD, in "The Great Psychiatry Scam - One Shrink's Personal Journey", 2008.*

Psychiatric Medical Trade Poisonous Medications, can Cause Major Significant Serious Physical and Psychological Harm. These Harms range from common, short-term side effects to Serious, Long-Term, sometimes Permanent, Adverse Effects on Physical Health, Brain Structure, and Behavioural Functioning.

"1. Alprazolam: Mental or mood changes (hallucinations, thoughts of Suicide), slurred speech, difficulty talking, loss of coordination, trouble walking, memory problems.

2. Amantadine: Mental or mood changes (hallucinations, thoughts of Suicide), slurred speech, difficulty talking, loss of coordination, trouble walking, memory problems.

3. Aripiprazole: Mood Changes, Depression, Compulsive Behaviours, Visual Disturbances.

4. Asenapine: Fast pounding heartbeat, fainting, mental or mood changes (e.g., increased anxiety, depression, Suicidal Thoughts), weakness, feelings of restlessness, mask-like facial expression, shakiness, muscle spasm or stiffness, trouble swallowing.

5. Artane: Severe dizziness, fainting, slow heartbeat, Seizures, interrupted breathing during sleep.

6. Atomoxetine: Chest pain, severe dizziness or fainting, high fever, fast or irregular slow heartbeat, mental or mood changes (e.g., confusion, hallucinations, memory problems).

> *"Suicidal Ideation in Children and Adolescents — STRATTERA (atomoxetine) increased the risk of Suicidal ideation in short-term studies in children or adolescents with Attention-Deficit/Hyperactivity Disorder (ADHD)." - FDA, Patient Information revised; 27 March 2007.*

7. Benztropine: Symptoms of Heart Attack or Stroke (chest, jaw or left arm pain, sudden severe headache, weakness on one side, confusion, slurred speech, sudden vision changes), or liver problems (yellow skin, dark urine, severe stomach pain, flu-like symptom).

8. Brexpiprazole: Tachycardia. ["REXULTI (brexpiprazole) tablets, for oral use Initial U.S. Approval: 2015; Antidepressants increased the risk of Suicidal Thoughts and behaviors in pediatric and young adult patients. Closely monitor all antidepressant-treated patients for clinical worsening and emergence of Suicidal Thoughts and behaviors. Increased mortality in elderly patients with dementia-related psychosis and Suicidal Thoughts and behaviors. Elderly patients with dementia-related psychosis treated with Antipsychotic Drugs are at increased risk of death." - in "Medication Guide", FDA, Revised: 5/2024]

> ***"In Terms of Preventing Suicide in schizophrenia, The Role of Antipsychotic Medications Has Been a Largely Neglected Area of study."*** *- in "Do Antipsychotic Medications decrease the risk of Suicide in patients with Schizophrenia?", Journal of Clinical Psychiatry, 1999.*

9. Bupropion: Fever, muscle stiffness, pain tenderness or weakness, severe tiredness, severe confusion, sweating, fast or irregular heartbeat, dark urine, signs of kidney problems.

> *"WELLBUTRIN XL (bupropion hydrochloride extended-release tablets); Suicidality and Antidepressant Drugs; Use in Treating Psychiatric Disorders: Antidepressants increased the risk compared to placebo of Suicidal Thinking and Behavior (Suicidality) in children, adolescents, and young adults in short-term studies of major depressive disorder (MDD) and other psychiatric disorders. Short-term studies did not show an increase in the risk of suicidality with antidepressants compared to placebo in adults beyond age 24." - in "Reference ID: 3541073", FDA, 12 June 2014.*

10. Buspirone: Chest pain, fainting, fast, pounding or irregular heartbeat, hearing problems, ringing in the ears, severe headache, mental or mood changes (e.g., agitation, anxiety, confusion, hallucinations), uncontrolled movements, unusual weight loss or gain.

11. Carbamazepine: Swelling of ankles or feet, fatigue, fast, slow or irregular heartbeat, severe headache, fainting, trouble urinating, unusual eye movements, vision changes, hearing problems, pain, redness or swelling of arms or legs, sun sensitivity, joint pain.

12. Chlordiazepoxide: Mental or mood changes, slurred speech, clumsiness, trouble walking, decreased or increased interest in sex, tremor, uncontrollable movements, facial or muscle twitching, trouble urinating, sleep disturbances.

The 3 Myths of Benzodiazepine Safety

> ***"The benzodiazepines are one of the most commonly prescribed classes of drugs in clinical medicine. Their general safety and efficacy have been well documented, but a group of adverse behavioural effects associated with their use has been less well acknowledged. These Adverse Effects include the risk of dependency, increases in Hostile-Aggressive feelings and behaviour, and Suicidal Depression. Physiologic dependence on benzodiazepines has been documented not only in patients taking very high doses over protracted periods of time or who have "high addictive potential", but also in healthy adults taking therapeutic doses for 20 or more weeks. Increases in hostility-aggression, originally considered a paradoxical drug effect, have been repeatedly demonstrated to be associated with diazepam and chlordiazepoxide. There is even some evidence that this ought to be considered a true drug effect rather than a paradoxical effect occurring in a substantial proportion of the people taking these Drugs. Depression, with or without Suicidal Ideation, is another potentially***

> ***Hazardous Effect of Benzodiazepines. A specific Syndrome of Ego-Alien Suicidal Ideation Has Been Identified and Reported. These Drugs sometimes produce "paradoxical" Effects, Increasing The Very Symptoms They Are Expected to Alleviate. In minimally anxious subjects, for example, Benzodiazepines have been shown to Actually Increase Anxiety. Rage Attacks, often quite intense, have been reportedly induced by Chlordiazepoxide, Diazepam, and Chloraxepate. In another study, Hall reported on a syndrome of "ego alien" Suicidal Ideation induced by large doses of Diazepam in patients with organic disorders. In Hall's series all of the patients showed a cluster of symptoms consisting of tremulousness, apprehension, and Insomnia, followed soon after by Depression related to "ego alien" Suicidal Ideation. The syndrome was abrupt and severe. All of the patients had been previously emotionally stable and all were significantly improved within 7 days after Diazepam was discontinued. This paper has examined 3 Myths of Benzodiazepine Safety: nondependence, consistent tranquilization, and low suicidal potential. Each of these myths at least partially accounts for the widespread use and abuse of Benzodiazepines. But there is an expanding body of literature challenging these myths and suggesting alternative treatment strategies. In every case, the Literature Suggests that the Physician Not Substitute Chemical Tranquilization for Comprehensive Patient Care. We agree with Katz's recommendation that "every time a physician reaches for his prescription pad he should ask himself if he is prescribing a sedative or tranquilizer because he has a room full of patients waiting and is in a hurry to get on to his next patient whose illness he considers more serious, or whether he has carefully considered all the evidence, has found that sympathy, understanding, suggestions, and reassurance are not sufficient, and has decided to prescribe a sedative or tranquilizer for positive reasons rather than as an easy way out"."*** *- Dr Sidney Zisook, MD; Dr Richard A. DeVaul, MD, in "Adverse Behavioral Effects of Benzodiazepines", The Journal of Family Practice, 1977.*

13. Chlorpromazine: Drowsiness, Dizziness, dry mouth, Blurred Vision, tiredness, Nausea, Constipation, weight gain, trouble sleeping or muscle or nervous system problems (Anxiety, agitation, jitteriness, drooling, trouble swallowing, restlessness, shaking or stiffness).

14. Citalopram (Celexa): Fainting, irregular heartbeat, black stools, vomit, seizures, hallucinations, unusual restlessness, loss of coordination, severe dizziness, unexplained fever, severe nausea, vomiting, diarrhea or twitching muscles. [Medications such as citalopram may increase the risk of Suicidal Thoughts and actions. This increase was found in children, teenagers, and young adults (less than 24 years of age). The risk may be more likely with the first few months of treatment and when the dose is increased.]

15. Clomipramine: Tachycardia, heart rate changes, changes to metabolism of other medications, changes to psychiatric illness, refractory weight gain, constipation, refractory dry eyes, dry mouth, dry skin, bowel problems, inability to urinate.

> *"Anafranil (clomipramine hydrochloride) Capsules USP; Suicidality and Antidepressant Drugs; Antidepressants increased the risk compared to placebo of Suicidal Thinking and Behavior (Suicidality) in children, adolescents, and young adults in short-term studies of major depressive disorder (MDD) and other psychiatric disorders." - in "Reference ID: 3600048", FDA, Rev 06/2014.*

16. Clonazepam: Unusual or sudden changes in mood, thoughts or behavior including confusion, memory problems, signs of depression, Suicidal Thoughts or attempts, thoughts of harming self.

17. Clonidine: Fainting, slow heartbeat, mental or mood changes (such as irritability, Depression).

18. Clozapine: High fever, fast irregular heartbeat, severe dizziness, fainting, muscle stiffness, mental or mood changes, difficulty breathing with exercise, swollen legs or feet, sudden weakness, pain, redness or swelling of arms or legs, chest pain, dark urine.

19. Desvenlafaxine: Drowsiness, Dizziness, Nausea, dry mouth, Constipation, loss of appetite, weight loss, Blurred Vision, Nervousness, trouble sleeping, excessive sweating.

20. Dexmethylphenidate: Fast pounding or irregular heartbeat, mental, mood or behavior changes (such as agitation, aggression, mood swings, depression, abnormal thoughts), uncontrolled muscle movements (such as twitching, shaking), sudden outbursts of words or sounds. Fainting, Seizures, symptoms of heart attach (such as chest, jaw or left arm pain, shortness of breath, unusual sweating), Symptoms of Stroke (such as weakness of one side of the body, slurred speech, vision changes, confusion).

21. Dextroamphetamine (Amphetamine): Chest pain, persistent cough, shortness of breath, black stools, coffee grounds vomiting, easy bruising or bleeding, Seizures, Hallucinations, restlessness, loss of coordination, fast heartbeat, severe dizziness or unexplained fever.

22. Diphenhydramine (Benadryl): Mental, mood or behavior changes (agitation, aggression, mood swings, depression, abnormal thoughts), uncontrolled movements, continuous chewing movements or teeth grinding, outbursts of words or sounds.

23. Divalproex: Signs of infection (e.g., fever, persistent sore throat), chest pain, easy bruising or unexplained bleeding, fast or irregular heartbeat, swelling of hands or feet, uncontrolled eye movements, Depression, Suicidal Thoughts or Other Mental or Mood Problems.

24. Duloxetine: Dark urine, persistent nausea or vomiting, severe stomach or abdominal pain, yellowing eyes or skin, unexplained weakness, vomiting or Sudden Mental Changes, serious allergic reaction (rash, itching, swelling of face or tongue, severe dizziness).

The Occurrence of Suicidality on Antidepressants

> ***"In both cases there is an emergence of Suicidality in apparently non-suicidal patients After Starting or Increasing Duloxetine. The duration after which suicidality emerged is similar to what has been reported in the literature i.e. 1–9 days. In addition the symptoms that preceded the suicidal attempts readdress the issue of antidepressant induced suicidality occurring in the context of agitation, irritability and impulsivity. Antidepressant monotherapy in patients with bipolar disorder and the bipolar spectrum could worsen the pre-existing mixed state of depression or generate mixed conditions de novo, resulting in treatment resistance, destabilization of the mood disorder, worsening of the depression and, possibly suicidal behavior in some patients."***
>
> *- in "Duloxetine and Suicide attempts: a possible relation", Clin. Pract. Epidemiol. Ment. Health, 11 June 2008.*

25. Escitalopram: Unusual or severe mental or mood changes (such as confusion, difficulty concentrating, nervousness, unusual high energy or excitement, **Thoughts of Suicide**), changes in sexual ability, easy bruising or bleeding, muscle weakness or cramps.

26. Eszopiclone: Memory loss, mental, mood or behaviour changes (new or **Worsening Depression, Abnormal Thoughts, Thoughts of Suicide, Hallucinations,** confusion, agitation, aggressive behavior, anxiety), trouble breathing.

27. Fluoxetine: Unusual or severe mental or mood changes (such as agitation, unusual high energy excitement, **Thoughts of Suicide)**, easy bruising or bleeding, muscle weakness or spasm, shakiness, changes in sexual ability, unusual weight loss, large pupils.

28. Fluphenazine: Black stools, vomit, Seizures, Hallucinations, Unusual Restlessness, loss of coordination, fast heartbeat, Severe Dizziness, unexplained Fever, Severe Nausea, Vomiting or Diarrhea, twitching muscles. Fluphenazine (Prolixin) is used as a Neuroleptic Pharmaceutical Drug of the Phenothiazine class

introduced in 1959. Is on the United Nations, World Health Organisation **"List of Essential Medicines, most important Medications needed in a basic Health System."**

Suicide Associated with Akathisia and Depot Fluphenazine

Primarily Caused By Antipsychotic Medications and Antidepressants.

> *"Akathisia is an intensely unpleasant feeling characterized by muscle discomfort, inability to sit still, continuous agitation, restlessness, and fidgety feelings. Sleep may be disturbed by an inability to lie down. Some patients say they feel like jumping out of their skin. It is of interest that both patients reported here killed themselves by jumping. Akathisia is Common and Distressing Side Effect of Neuroleptic Medication that can be difficult to treat. Reports mention Maladaptive Behavioural Consequences, such as poor compliance with prescribed Medication and Aggressive or Self-Destructive outbursts.* ***We are reporting Suicides in 2 young men who Developed Severe Akathisia After Treatment with depot Fluphenazine. Depression with Suicidal Behaviour has been observed following Fluphenazine Injection."*** *- in "Suicide Associated with Akathisia and Depot Fluphenazine Treatment", Journal of Clinical Psychopharmacology, 4 August 1983.*

> ***"3 cases of Suicidal Ideation Associated with Akathisia caused by Fluphenazine depot injection."*** *- in "Phenothiazine-induced decompensation", Arch. Gen. Psychiatry, 1974.*

> ***"2 Cases of Impulsive Suicide Attempts Associated with Akathisia in a young man commenced on Haloperidol, and a young woman started on Fluphenazine Depot."*** *- in "Suicide Attempts Associated with Akathisia", American Journal of Psychiatry, 1985.*

Depot Fluphenazine (Decanoate or Enanthate) is a long-acting Injectable Antipsychotic Vaccine given every 2–4 weeks **To Enforce Compliance in Schizophrenia,** standard Fluphenazine is usually an oral medication.

29. Gabapentin: Swelling of the hands, ankles or feet, signs of infection (such as fever, cough, persistent sore throat), unusual or sudden changes in your mood, thoughts, or behavior including signs of **Depression, Suicidal Thoughts** or Attempts.

Gabapentin Related Suicide

> ***"We discuss the Side-effects of Gabapentin, used as part of the multimodal treatment approach of painful spinal degenerative disease. The Patient stated that he had Noticed Personality Changes After Gabapentin was initiated, and that he had Become More Depressed, Frustrated, and Aggressive. His uncontrolled pain and acute mood changes led him to Attempt Suicide by Hanging Himself. Gabapentin was Discontinued and the***

> ***patient's Suicidal Ideation Completely Subsided. It is crucial to raise awareness of Gabapentin as a potential Cause of Depression, Aggressive Behaviour, and Suicidal Ideation."*** *- in* ***"Gabapentin-Related Suicide: Myth or fact?"****, Surgical Neurology International, 23 October 2018.*

30. Guanfacine: Severe dizziness, fast or slow heartbeat, fainting, mental or mood changes (such as **Depression, Confusion).**

31. Haloperidol: Dizziness, drowsiness, difficulty urinating, sleep disturbances, Headache, Anxiety, muscle spasm or stiffness, Shaking, Restlessness, mask-like facial expression, drooling.

32. Haloperidol Decanoate: Dark urine, persistent nausea or vomiting, stomach or **Abdominal Pain**, yellowing of eyes or skin, **Seizures,** signs of infection (fever, persistent sore throat), irregular heartbeat, severe dizziness, chest pain, fainting.

33. Hydroxyzine: Mental or Mood changes (**Worsening Anxiety, Confusion, Hallucinations), shaking, decreased or painful urination, Vision Changes.**

Associations Between Insomnia Medications and Risk of Death by Suicide

> *"More than 2 Million patients filled a new Insomnia Prescription between 2005-2015, and* ***518 Died by Suicide within 12 months.*** *Compared to Zolpidem, the Tricyclic Antidepressants (Amitriptyline, Doxepin)* ***were Associated with a 64% lower risk of Suicide*** *(HR 0.36 and the Sedating Antihistamines (Hydroxyzine, Diphenhydramine) a 40% lower Risk of Suicide (HR 0.60). In contrast, the Tetracyclic Antidepressant (Mirtazapine) was Associated with a 62% Higher Risk of Suicide compared to Zolpidem." - in* ***"Associations Between Insomnia Medications and Risk of Death by Suicide"****, Sleep Medicine, November 2023.*

34. Iloperidone: Drooling or trouble swallowing, signs of infection (persistent cough, fever), shaking (tremor), muscle stiffness or spasms, uncontrollable movements such as lip smacking, mouth puckering, tongue thrusting, chewing, or unusual arm or leg movements.

35. Imipramine: Dry mouth, blurred vision, headache, drowsiness, dizziness, Constipation, nausea, vomiting, loss of appetite, diarrhea, stomach cramps, weight gain or loss, increased sweating, mental or mood changes.

36. Lamotrigine: Unusual or sudden changes in Mood, thoughts or behavior including signs of **Depression, Suicidal Thoughts or Attempts, Thoughts of Harming Self.**

37. Lisdexamfetamine (Vyvanse): Blurred vision, pounding or irregular heartbeat, Mental, Mood or behavior changes **(Agitation, Aggression, Mood Swings, Depression, Hallucinations, abnormal thoughts or behavior),** involuntary movements, muscle twitching or shaking, outbursts of words.

> ***"Mania or Suicidal Ideation, Seizures, serotonin syndrome, hypertensive crisis, peripheral vasculopathy, cardiovascular adverse effects including Sudden Death in patients with pre-existing cardiac structural abnormalities."*** *- in "Facts About Lisdexamfetamine (Vyvanse)", Wisconsin Child Psychiatry Consultation Program, 30 December 2020.*

38. Lithium: Diarrhea, vomiting, fever, dizziness, unsteady walk, confusion, slurred speech, blurred vision, severe hand trembling. Fainting, vision changes (blind, vision loss), Seizures, irregular heartbeat, joint swelling or pain, pain or discoloration of finger or toes, cold hands or feet or a serious allergic reaction.

39. Lorazepam: **Mental or Mood Changes (such as Hallucinations, Depression, Thoughts of Suicide)**, slurred speech or difficulty talking, vision changes, unusual weakness, trouble walking, memory problems, fever, persistent sore throat.

40. Loxapine: Signs of infection (such as fever, persistent sore throat), seizures, severe stomach or abdominal pain; fever, stiff muscles, sweating, irregular heartbeat, **sudden mental or mood changes (confusion, Loss of Consciousness).**

41. Lurasidone (Latuda): Drooling or trouble swallowing, fainting, fast or irregular heartbeat, signs of infection (such as persistent cough, fever), face or muscle twitching and uncontrollable movements (tardive dyskinesia). Neurleptic Malignant Syndrome (unexplained fever, stiff muscles, increased sweating, fast or irregular heartbeat, sudden mental or mood changes).

> ***"What is the most important information I should know about Latuda?***
>
> ***Latuda may cause serious side effects, including: 1. Increased risk of death in elderly people who are confused, have memory loss and have lost touch with reality (dementia-related psychosis). Medicines like Latuda can increase the risk of death in elderly people who are confused, have memory loss and have lost touch with reality (dementia-related psychosis). Latuda should not be used to treat people with dementia-related psychosis. 2. Increased risk of Suicidal Thoughts or actions (antidepressant medicines, depression and other serious mental illnesses, and Suicidal Thoughts or actions)."****- in "Medication Guide Latuda (Lurasidone Hydrochloride)", Reference ID: 3338948, FDA, July 2013.*

42. Melatonin: Mental or Mood Changes (e.g., Depression, Confusion).

> ***"In this national register study, Treatment with Melatonin Was Associated with Both Suicide and Suicide Attempt. Treatment with Melatonin May Be An Indicator of Suicide Risk, especially in individuals with Mental Health and/or sleep disorders."*** *- in* ***"Associations Between Treatment with Melatonin and Suicidal behavior:*** *a nationwide cohort study", J. Clin. Sleep Med., 1 October 2022.*

43. Methylphenidate: Tourette's Syndrome, blood pressure or pulse changes, Toxic Psychosis.

Connected to Serious Psychiatric and Cardiovascular Adverse Events And Increased Risk of Suicide

> ***"A study found that Methylphenidate Use is Associated with an Increased Risk of Suicide attempt in adults up to 40 years old. The study investigated potential Associations between Methylphenidate and Depression, Suicide Attempt, and overall mortality. Methylphenidate is one of the most commonly Prescribed Medications for both children and adults for Attention-Deficit/Hyperactivity Disorder (ADHD); It Has Been Connected to Serious Psychiatric and Cardiovascular Adverse Events; some clinicians also believe the properties of Methylphenidate mean the Drug has the potential to Induce Psychotic Symptoms and disorders. The Strong Association with Death in our study Is Striking." - in "Study Shows Connection Between ADHD Medication and Risk of Suicide Attempt", Psychiatric Times, 12 September 2022.***

44. Metoprolol: Bone pain, continuing ringing or buzzing or other unexplained noise in the ears, dry eyes, hair loss or thinning of the hair, hearing loss, increased sensitivity of the skin to sunlight.

45. Mirtazapine (Remeron): Hallucinations, unusual restlessness, loss of coordination, fast heartbeat, severe dizziness, unexplained fever, severe nausea, vomiting or diarrhea, muscle twitching or stiffness, loss of consciousness.

> *"Suicidal Ideation: Taking Antidepressant Drugs, including Mirtazapine (Remeron), Can Lead to New or Worsening symptoms of* ***Depression*** *in depressed patients as well as* ***Suicidal Thoughts and behaviors."*** *- in "Mirtazapine (Remeron) Risks, Warnings, and Complications", BuzzRx, 24 February 2023.*

46. Modanfinil: Fast pounding or irregular heartbeat, **Mental Mood Changes** (such as **Agitation, Confusion, Depression, Hallucinations, Thoughts of Suicide).**

47. Naltrexone and Bupropion: Nausea, headache, dizziness, anxiety, tiredness, and trouble sleeping.

> ***"Drugs like this one have raised the chance of Suicidal Thoughts or actions in children and young adults. The risk may be greater in people who have had these thoughts or actions in the past."*** *- in "Naltrexone and Bupropion", Memorial Sloan Kettering Cancer Center, 12 December 2022.*

48. Nicotine Gum: Severe dizziness, mental or mood changes (e.g., irritability, trouble sleeping, vivid dreams), numbness or tingling in hands or feet, swelling hands, ankles or feet.

49. Nicotine Lozenge or Patch: Severe dizziness, mental or mood changes, numbness or tingling in hands or feet, swelling of hands, fee or ankles. Chest pain, confusion, severe headache, fast irregular or pounding heartbeat, slurred speech, weakness.

50. Nuedexta: Lightheadedness, elevated body temperature, unexplained bleeding or bruising, muscle twitching, confusion, high blood pressure, restlessness, unusual sweating, chills (signs of serotonin syndrome).

51. Olanzapine and Fluoxetine: Fast heartbeat, ankle or leg swelling, agitation, confusion, restlessness, weakness, difficulty speaking, numbness or tingling of hands or feet, trouble walking, painful menstrual periods, pink urine or tremor.

> ***"Drugs like this one have raised the chance of Suicidal Thoughts or actions in children and young adults. The risk may be greater in people who have had these thoughts or actions in the past."*** *- in "Olanzapine and Fluoxetine", Memorial Sloan Kettering Cancer Center, 12 December 2022.*

52. Oxcarbazepine: Unusual or sudden changes in mood, thoughts, or behavior including signs of depression, **Suicidal Thoughts or Attempts, Thoughts About Harming Self,** double vision, change in vision, involuntary eye movements, difficulty speaking.

53. Paliperidone: Seizures, fainting, chest pain, unusual or uncontrolled movements (face, lips, mouth, tongue, arms or legs), muscle stiffness or pain, high fever, sweating, mental or mood changes, change in the amount of urine.

54. Paliperidone (Invega Sustenna): Difficulty swallowing, fast or slow irregular heartbeat, restlessness, shaking (tremor),muscle spasms, pain, swelling or redness of arms or legs, signs of infection (such as fever, persistent sore throat), fever, swollen lymph nodes, rash, itching, severe dizziness, trouble breathing.

55. Paroxetine: Black stools, vomiting, hallucinations, unusual restlessness, loss of coordination, fast heartbeat, severe dizziness, unexplained fever, severe nausea, vomiting or diarrhea, twitching muscles.

Manufacturer Admits Increase in Suicidal Behaviour And Malformations

> ***"GlaxoSmithKline announced last week that they had Found an Increase in Suicidal Behaviour in adults taking Paroxetine (Paxil/Seroxat).*** *The Glaxo study confirms the suggested link between* ***Suicidal Behaviour, and Antidepressants*** *in adults. In December 2005, the FDA issued an alert stating that "paroxetine increases the risk of congenital malformations" in children exposed in utero to paroxetine during the first trimester, according to preliminary results of two recent studies. The most common malformation, according to a news release by GSK, is ventricular septal defect." - in "Manufacturer Admits Increase in Suicidal Behaviour in patients taking Paroxetine", BMJ, 20 May 2006.*

56. Pimozide: Severe dizziness, fainting, fast, slow or irregular heartbeat, seizures, fever, stiff muscles, sweating, fast or irregular heartbeat, sudden mental or mood changes (such as confusion, loss of consciousness), change in the amount of urine.

57. Prazosin: Pounding heartbeat, fainting, frequent urination, mental or mood changes (such as Depression), swelling of the feet or ankles.

58. Propranolol: Muscle contractions in the bronchi or lungs, Hallucinations (hearing, seeing, tasting, smelling, or feeling something that doesn't exist), uncontrolled mood swings, confusion, mental depression.

> ***"There Is No Evidence It Is Effective,*** *it has Significant Side Effects and it can be Dangerous in overdose." - in "Common practical questions – and answers – at the British Association for Psychopharmacology child and adolescent psychopharmacology course", Journal of Psychopharmacology, 2022.*

59. Quetiapine: Restlessness or constant need to move, shakiness, signs of infection (fever, persistent sore throat), mental or mood changes (increased Anxiety, **Depression, Thoughts of Suicide**), difficulty swallowing.

60. Ramelteon: Mental or mood changes (e.g., **Depression, Strange Thoughts, Thoughts of Suicide).**

61. Risperidone: Severe dizziness, fast, pounding or irregular heartbeat, mental or mood changes, fever, muscle stiffness, spasm or twitching, sweating, uncontrolled muscle movements, drooling, difficulty swallowing, seizures, frequent falls. Risks associated with risperidone include Suicidal Thoughts or behaviors, particularly in the initial phases of treatment or when changing doses.

62. Risperidone Consta: Severe dizziness, fast, pounding or irregular heartbeat, mental or mood changes, fever, muscle stiffness, spasm, twitching, sweating, uncontrolled muscle movements, drooling, difficulty swallowing, Seizures or Frequent Falls.

63. Thioridazine: Dizziness, nausea, headache, lethargy, drowsiness, weight gain, nasal congestion, restlessness. Akathisia, Constipation, Confusion, difficulty urinating, jaundice, blurred vision, contact dermatitis. Fainting, irregular heartbeat, rapid breathing, muscle stiffness, tardive dyskinesia, seizures, visual impairment, bronchospasm or aphyxia.

> ***"One of the many drugs he was given was Thioridazine, which gave him an irregular heartbeat, something which can be potentially fatal. "Some drugs made me so anxious I tried to kill myself and ended up getting locked up in hospital." David remembers lying down with his heart beating really fast, thinking he did not have long left to live." - in "Antipsychotic drugs made me want to kill myself",*** *BBC News, 6 May 2012.*

64. Topiramate: Signs of kidney stones (such as severe back side, abdomen or groin pain, fever, chills, painful or frequent urination, bloody or pink urine), depression, Suicidal Thoughts or attempts, other mental or mood problems.

Topiramate-Induced Suicidal Ideation and Olfactory Hallucinations

> *"Antiepileptic Drugs prescribed in the context of migraine* ***have been reported to be potentially linked with an increased risk of suicidal ideation and behavior. Meta-analyses support the evidence that amongst Antiepileptic Drugs, Topiramate has the greatest potential for facilitating the occurrence of suicidal ideation and behavior.*** *This occurs via the increased incidence of* ***mood disorders amongst the population with migraines using Topiramate as a treatment, with a slow and progressive onset of Suicidal Ideation.*** *A 43-year-old man known to have chronic migraines, presented with intense rapid-onset suicidal ideation and olfactory hallucinations, 3 weeks after the introduction of Topiramate for chronic migraines.* ***Topiramate was ceased. The Suicidal Ideation and olfactory Hallucinations resolved in less than 24 h*** *without further interventions." - in "Topiramate-Induced Suicidal Ideation and Olfactory Hallucinations: A Case Report", Reports, MDPI, 6 April 2022.*

65. **Sertraline (Zoloft):** Black stools, vomit, Hallucinations, unusual restlessness, loss of coordination, fast heartbeat, severe dizziness, unexplained fever, severe nausea, vomiting, diarrhea, twitching muscles. [Sertraline (Zoloft) carries a boxed warning regarding an **Increased Risk of Suicidal Thoughts**, and behaviours. For people with Depression, it can cause new or worsening agitation, panic attacks, or self-harming thoughts.]

> ***"Medications such as sertraline may increase the risk of Suicidal Thoughts and actions.'*** *- in "Sertraline", Medlineplus Gov, 15 October 2025*

66. Trazodone: Signs of infection (e.g., fever, persistent sore throat), shortness of breath, stomach or abdominal pain, chest, jaw or left arm pain, fainting, fast or irregular heartbeat, seizures, severe dizziness. [Trazodone carries an FDA black box warning for I**ncreased Risks of Suicidal Thoughts**, and actions in children, teenagers, and young adults (under 24) during initial treatment or dose changes. As an Antidepressant, it may cause worsening depression or behavioural changes.]

67. Trilafon: Difficulty urinating, involuntary or repetitive muscle movements such as lip smacking or puckering, tongue thrusting, chewing, or finger or toe movements (tardive dyskinesia), Seizures.

68. Valproic Acid: Chest pain, easy bruising or unexplained bleeding, fast or irregular heartbeat, swelling of hands or feet, uncontrolled eye movement (nystagmus), Dark urine, persistent nausea or vomiting, severe stomach or abdominal pain, yellowing eyes or skin, unexplained weakness and vomiting or sudden mental changes. [Valproic Acid (including divalproex sodium), used for epilepsy, bipolar disorder, and migraines, carries a boxed warning from the FDA for Suicidal Thoughts or behaviors. Studies Suggest a Potential Increase in Suicidality.]

69. Venlafaxine: Black stools, persistent cough, Seizure, Severe or Pounding Headache, Shortness of Breath, vomit that looks like coffee grounds, Hallucinations, unusual restlessness, loss of coordination, fast heartbeat, severe dizziness, unexplained fever.

> *"Venlafaxine use was Consistently Associated with* ***Higher Risk of Suicide*** *compared with citalopram, fluoxetine, and dothiepin. Venlafaxine users had a higher burden of Suicide Risk Factors." - in* ***"Risk of Suicide during treatment with venlafaxine, citalopram, fluoxetine, and dothiepin: retrospective cohort study",*** *BMJ, 3 February 2007.*

70. Vilazodone: Numbness or tingling, tremor, restlessness, inability to keep still, difficulty concentrating, confusion, memory problems, weakness, unsteadiness, pounding heartbeat. [Vilazodone (brand name Viibryd) carries an FDA-mandated boxed warning for an increased risk of Suicidal Thoughts and behaviors.]

71. Vortioxetine: Shaking (tremor), restlessness, inability to keep still, numbness or tingling, easy bruising or bleeding, difficulty concentrating, memory changes, confusion, weakness. Seizures, black stools, vomit, vision changes, fast heartbeat, hallucinations, loss of coordination, severe dizziness, severe nausea, vomiting, diarrhea or twitching muscles. [Like all Antidepressants, vortioxetine (Trintellix) carries a boxed warning regarding an increased risk of Suicidal Thoughts and behaviors.]

72. Vraylar: Seizure, stroke, muscle spasms, low or high blood pressure, blurred vision. high heart rate, Gastro-Intestinal upset, cataracts, abnormal blood counts, high blood sugar, diabetes mellitus, jaw muscle spasm, difficulty swallowing, elevated body temperature. **Suicidal Thoughts** or actions, destruction of muscle cells, confusion, muscle rigidity, abnormal movements of face or jaw, elevated ketones, neck muscle contraction, rash, swelling underneath the skin.

73. Ziprasidone: Severe persistent dizziness, mental or mood changes (e.g., **Agitation, Anxiety, Depression, Suicidal Thoughts**), feelings of restlessness, mask like facial expression, shakiness, muscle spasm or stiffness, numbness or tingling, trouble swallowing.

74. Zolpidem: Memory loss, mental mood or behavior changes (new or worsening depression, abnormal thoughts, **Thoughts of Suicide, Hallucinations, Confusion, Agitation, Aggressive behavior, Anxiety**)." - in "List of Psychotropic Medications and Side Effects", Texas Health and Human Services, April 2023.

> ***"Most medical funding into research goes into Drug development, Big Pharma is big money. Whilst its important that medication is as safe as it can be, most new drug treatments did little more than existing alternatives, especially in psychiatry where only 1 new Drug out of 18 developed between 2011 and 2017 brought additional benefits to patients."*** *- in **"Billions Wasted on developing Needless Medicines"**, The Times, 11 July 2019.*

Pharmaceutical Can Make You Depressed, Agitated And Suicidal

> ***"40,000 or more different Medical Trade Pharmaceuticals in America and Europe that can make you Depressed, Agitated or Suicidal. "Use of Multiple Medications Was Associated with Greater Likelihood of concurrent Depression." (Prevalence of Prescription Medications With Depression as a Potential Adverse Effect*** *Among Adults in the United States", JAMA, 12 June 2018),* ***showed, The More Drugs you are on, The Greater The Risk You Run."*** *- in* ***"Drugs That Can Cause Depression, Agitation & Suicidality",*** *RxISK, June 2018.*

Medical Trade Pharmaceuticals Cause Suicidal Ideation

"Shortly after she was diagnosed with Psoriatic Arthritis, Sarah **was prescribed Otezla (Apremilast). In less than 2 months after beginning the Drug Treatment, she started experiencing Suicidal Ideation.** A study suggests that it's more than just which Drugs you're taking; but how many that could influence Depression.

"Prevalence of Prescription Medications With Depression as a Potential Adverse Effect Among Adults in the United States", JAMA, 2028, reports that 15% of adults who simultaneously used 3 or more medications that listed Depression or Suicidal Ideation as possible Adverse Effects experienced Depression compared to 7% of those taking just 1 Medication, and 9% of those using 2 of the Drugs. "US adults using Medications with Depression as a potential Adverse Effect was 37.2%.

The adjusted percentage of adults with concurrent Depression was higher among those using more concurrent Medications (15% for greater than or equal to 3 Medications). Use of Prescription Medications that have Depression as a potential adverse effect was common. Use of Multiple Medications Was Associated With Greater Likelihood of concurrent Depression." **Kim Wictzak tells Med Shadow, that Zoloft an Antidepressant Prescribed to treat her husband's Insomnia; instead led to his Death by Suicide.**

Drugs Associated with an added risk for Depression and Suicidal Thoughts:
1. Fioricet (Butalbital/acetaminophen/caffeine).
2. Vicodin (Acetaminophen/Hydrocodone/Bitartrate).
3. Alprazolam.
4. Azithromycin.
5. Carisoprodol.
6. Codeine Phosphate/Promethazine Hydrochloride.
7. Cyclobenzaprine Hydrochloride.
8. Diazepam.
9. Prednisone.
10. Promethazine Hydrochloride.

Drugs that list Depression as a potential adverse effect, according to the JAMA study, were antihypertensives (blood pressure-lowering drugs), proton-pump inhibitors (like Omeprazole for acid reflux), analgesics and hormonal contraceptives. More often than not, if a patient was prescribed a combination of drugs with the potential to cause depression, that mixture included antihypertensives and proton-pump inhibitors." - in "Suicidal Ideation: It May be Your Medications", Med Shadow Foundation, 30 December 2020.

Attention Deficit Hyperactivity Disorder Drugs Increase Risk of Suicidal Thoughts And Behaviours

"Stronger, Clearer Warnings on the Risk of Suicidal Thoughts and Behaviours are being incorporated into the prescribing information for Drugs used in the management of Attention Deficit Hyperactivity Disorder (ADHD).

The new warnings advise that there have been reports of Suicide-related events in patients treated with ADHD Drugs.

The Reports Involved Thoughts of Suicide, Suicide Attempts, and Completed Suicide. These events have been reported at various times during treatment, particularly at the start or during dose changes, and also after stopping the drug treatment. There are different types of ADHD Drugs and the evidence varies with respect to the risk of Suicidal Thoughts and behaviours.

This Risk is already known for one ADHD drug, Strattera (Atomoxetine), and was incorporated into its prescribing information and communicated in 2005.

ADHD Drugs are available by prescription only and are authorized for use in adults and children over the age of 6 years.

There are several Drugs available in Canada:

1. **Adderall XR (mixed salts amphetamine extended-release)**
2. **Biphentin (methylphenidate controlled release)**
3. **Concerta (methylphenidate extended release)**
4. **Dexedrine (dextroamphetamine sulfate)**
5. **Intuniv XR (guanfacine hydrochloride extended release)**
6. **Ritalin (methylphenidate)**
7. **Ritalin SR (sustained-release) (methylphenidate)**
8. **Strattera (atomoxetine)**
9. **Vyvanse (lisdexamfetamine dimesylate)**

It is Health Canada's view that the benefits of these drugs in the effective management of ADHD continue to outweigh their risks." - in "ADHD drugs may increase risk of Suicidal Thoughts and behaviours in some people; benefits still outweigh risks", Health Canada, 30 March 2015.

Insomnia Medication Associated With Suicidal Thoughts

"Z-Drugs (Eszopiclone, Zolpidem, and Zaleplon) are commonly used for insomnia but are Also Associated with Suicide Risk. Multiple classes of Prescription Insomnia Medications Are Associated With Suicidal Thinking and Behaviours, even after analyses adjusted for measures of mental health. Indeed, **Z-Drugs, Trazodone, and Sedative Benzodiazepines Were All Associated with Suicidal Ideation**, planning, and attempts, even when analyses accounted for multiple confounding factors." - in **"Prescription Medications for Insomnia are Associated With Suicidal Thoughts and Behaviors** in two nationally representative samples", Journal of Clinical Sleep Medicine, 1 May 2021.

Sleeping Medication Carry A Suicide Risk

"Prescription Sleep Aids appear to Carry a Risk of Suicide, most typically when they cause the unexpected response of stimulating rather than quietening patients, researchers say.

> ***"These Medications; Instead of Calming, they may Hyper-Stimulate; Instead of being relaxed, Patients Become Fearful; so, It Goes the Opposite Way."*** *- Dr W. Vaughn McCall, chair of the Department of Psychiatry and Health Behavior and Case Distinguished Chair at the Medical College of Georgia at Augusta University.*

Hypnotics Prescribed As A Sleep Aid Associated With Suicidal Thoughts

The Food and Drug Administration **Mandates a Warning of Suicidal Thoughts** and/or actions be included in the often-discarded package insert that comes with modern hypnotics. He is the corresponding author on a review article in The American Journal of Psychiatry, that examined **published Studies, as well as Reports on file with the FDA, which Associated Modern Hypnotics Prescribed as a Sleep Aid with Suicidal Thoughts and Actions."** - in "Prescription Sleep aids carry a rare Suicide Risk, review finds", Augusta University, Medical Partnership, University of Georgia, 3 October 2016.

Psychiatry is Profoundly Unscientific and Unsuccessful

"Psychiatry, has therefore been unique in the extent to which it Has Generated both fascination, and Mistrust Amongst Intelligent People. It has been Profoundly Unscientific, and at the same time Unsuccessful. How many psychotic patients Would Be Better Off Without Taking Drugs, my guess is as High as 50%. The long-term impact that Psychiatric Drugs have on the developing brain - as yet unknown - seems not to trouble the doctors who prescribe them. Pharmaceutical Drugs are prescribed without any serious attempt to understand or remedy the awful social circumstances in which psychologically disturbed children often live." *- in "Doctoring the Mind -* ***Is Our Current Treatment for Mental Illness Really Any Good?"****, 2009.*

"Medications are less than perfect, their use is fraught with side effects, and effectiveness is variable. Our evidence that Medications work is tainted by Pharmaceutical Company involvement in the research. And even as we move to a more recovery-based approach, we have not eliminated the elements of coercion that have arguably added to fear and stigma." *- in "Psychiatric Services", No.5, Vol. 62, May 2011.*

Psychiatry "Electroconvulsive Therapy" Damages the Brain

"I was doing research on Psychiatry's So-Called "Electroconvulsive Therapy." I found over-whelming evidence It Damages the Brain, Diminishes Intelligence, Causes Memory Loss, and Does Not Reduce Unhappiness, or so-called Depression as is claimed [Psychiatry's Electroconvulsive Shock Treatment: A Crime Against Humanity, 1991].

Psychiatric Pharmaceutical Medication Are
Psychologically Harmful, Cause Biological Injury, And Permanent Brain Damage

My reading about Psychiatric Drugs, reinforced my impression Most If Not All Psychiatric Drugs Are Ineffective, for their intended purposes, and I learned many of the most widely used Psychiatric Drugs are not merely Psychologically Harmful, But Cause Biological Injury, Including Permanent Brain Damage." - in "The Case Against Psychiatry: Why Psychiatry is Evil and Must Be Abolished", 26 May 2020.

The So-Called Psychiatry: As A Science Is Utterly Absurd

"The idea that anyone would describe "Psychiatry As A Science Is Utterly Absurd."

Nothing that psychiatrists claim as "Group-based form of Acceptance and Commitment Therapy" can be proved; by any means recognized by scientists. There Is No Proof to show that any Psychiatric Disorders really Exist.

Many Psychiatrists Claim that:

"We are all mentally ill and that we all need treatment."

Psychiatry: All Its Treatments Are Nonsensical Rubbish
The sad truth is Psychiatry Is A Nonsensical Speciality.
And All Its Treatments Are Unproven Rubbish." - Dr Vernon Coleman, MD, **"Do Doctors and Nurses Kill More People Than Cancer?"**, European Medical Journal, 2011.

Psychiatry Has Become A Threat To Others

"Dr Levine's conclusion is that ***"Psychiatry Has Become Psychotic" because of psychiatrists loss of touch with reality, that Psychiatrists Have Become a "Threat To Others", and that Psychiatry as a profession "Needs To Be Abolished"."*** *- Bruce E. Levine, PhD, in "Annual conference of National Association for Rights Protection and Advocacy", 8 September 2012.*

"Psychiatry is a Destructive, hocus-pocus, facile sorting activity which assigns so-called diagnoses, and distributes Neuro-Toxic Drugs to People whose Problems Are Mot Medical in Nature. Psychiatry is everywhere being exposed as the facile and destructive hoax that it is." *- Philip Hickey, Psychologist, in "Psychiatry Bashing", Behaviorism and Mental Health, 7 March 2016.*

"The Institution of Psychiatry has just done monstrous inestimable Harm through its several hundred year existence." *- Dr Peter R. Breggin, MD, Psychiatrist, in "The Dr Peter Breggin Hour", 3 October 2018.*

Something Is Rotten In Psychiatry

"There is only One Agenda item in American Psychiatry: The relentless expansion of Psychiatric Turf and Drug Sales. The bottom line is always the same: Turf and Money. Something is Truly Rotten in the State of Psychiatry.

In the Introduction to DSM-4, 1994:

> *"It was suggested that the DSM-IV* ***Classification be organized following a Dimensional Model rather than the Categorical Model*** *used in DSM-III-R.* ***A Dimensional System classifies clinical presentations Based on Quantification of Attributes Rather than the Assignment of Categories, and works best in Describing Phenomena that are distributed continuously and that Do Not Have Clear Boundaries.*** *Although* ***Dimensional Systems*** *increase reliability and communicate more clinical information (because they report clinical attributes that might be subthreshold in a categorical system),* ***they also have serious limitations and thus far have been less useful than categorical systems in clinical practice,*** *and in stimulating research.* ***Numerical dimensional descriptions are much less familiar and vivid than are the categorical names for mental disorders. Moreover, There Is as yet No Agreement on the choice of the optimal dimensions to be used for classification purposes.*** *Nonetheless, it is possible that the increasing research on, and familiarity with,* ***Dimensional Systems may eventually result in their greater acceptance*** *both as a method of conveying clinical information, and as a research tool." - DSM-4, 1994*

Psychiatric Diagnostic Don't Capture Clinical Reality

> *"Indeed,* ***the once plausible goal of identifying homogeneous populations for treatment and research resulted in narrow diagnostic categories that did not capture clinical reality."*** *- in "Introduction to DSM-5, 2013, under the heading Dimensional Approach to Diagnosis (p.12)*

Psychiatric Diagnostics Have No Validity

This is a way of saying that the "diagnoses," collected and set out in successive revisions of the manual, have no validity – they don't "capture" reality!

Is a truly amazing admission, given that it is precisely the alleged ontological reality of these "Diagnoses" that has Constituted the Conceptual Underpinning of Psychiatry and the |Legitimization of the Drugging for the past 60 years." - in "DSM-5 – Dimensional Diagnoses – More Conflicts of Interest?", Behaviorism And Mental Health, 23 December 2013.

Why Psychiatrists Stick To Wrong Diagnoses

"Wrong Diagnostic Decisions: To study whether **Psychiatrists and Medical Students are prone to confirmation bias and whether confirmation bias leads to Poor Diagnostic Accuracy in Psychiatry**, we presented an experimental decision task to 75 Psychiatrists and 75 Medical Students.

Wrong Diagnosis In 70% of Cases

Psychiatrists conducting a confirmatory search Made a Wrong Diagnosis in 70% of the Cases compared to 27% or 47% for a disconfirmatory or balanced information search (Medical Students: 63, 26 and 27%).

A Fatal Chain of Wrong Decisions

Diagnostic Errors can have tremendous consequences because they can result in a Fatal Chain of Wrong Decisions." - in "Confirmation bias: Why Psychiatrists Stick to Wrong preliminary Diagnoses", Psychol. Med., December 2011.

Psychiatry Should Be Abolished There Is No Scientific Merit To Psychiatry

"Psychiatric Disorders encompass complex aberrations of cognition and affect and are among the most debilitating and poorly understood of any condition.

Current treatments rely primarily on interventions that target brain function (Drugs).

A mechanistic understanding of how these interventions mediate their therapeutic effects remains elusive.

From the early 1990's, Neuroimaging, coupled with parallel developments in the cognitive neurosciences, seemed to signal a new era of Neurobiologically grounded Diagnosis and Treatment in Psychiatry.

Yet, despite 3 Decades of Intense Neuroimaging Research, we still Lack a Neurobiological account For Any Psychiatric Condition.

Likewise, **Functional Neuroimaging Plays No Role in Clinical Decision making."** - in "Functional Neuroimaging in Psychiatry and the case for failing better", Neuron, 17 August 2022.

"Try Again. Fail Again. Fail Better." *- Samuel Beckett, in "Worstward Ho!", 1983.*

The Scale of Investment in functional neuroimaging as a research tool in Psychiatry dwarfs that of other recent innovations, with more than 16,000 published articles over the past 3 Decades (33% in the last 5 years alone, according to PubMed).

Yet, it is sobering to acknowledge that functional neuroimaging, in particular modalities such as Functional Magnetic Resonance Imaging (fMRI), and Magnetoencephalography / Electroencephalography (MEG/EEG), Plays No Role in Clinical Psychiatric Decision Making. Nor Has it defined a neurobiological basis for any Psychiatric condition or symptom dimension.

Thus, it remains difficult to refute a critique that **Psychiatry's Most Fundamental Characteristic Is Its Ignorance, that it cannot successfully define the object of its attention, while its attempts to lay bare the etiology of its disorders Have Been a Litany of Failures** ("The less you know: **How Psychiatrists have maintained their authority in the face of Repeated Failure**", Times Lit. 30 April 2021).

In 2022, research reviews made it clear that **There Is No Neurobiological Evidence: No Chemical Imbalance, No Brain Structure Evidence; For Any Psychiatric Condition.**

But That's Not The End of Psychiatry's 2022 Nightmare.

The most prominent Psychiatrists in the world, in 2022 stated that the Psychiatry's Diagnostic Manual (DSM), Lacks Validity.

Thomas Insel, National Institute of Mental Health (NIMH) Director in 2013, had quietly stated in his NIMH blog that the DSM's diagnostic categories lack validity.

> ***"The DSM had created a common language, but much of that language had Not Been Validated by Science."***

In plain language, Insel is calling the DSM, in a Scientific Sense, Bullshit.

In 2022, increasing numbers of Americans also heard about **Psychiatry's Abysmal Treatment Outcome record.**

Insel, as NIMH Director in 2011, had quietly acknowledged:

> ***"Whatever we've been doing for 5 Decades, it ain't working. And when I look at the numbers; the number of Suicides, number of disabilities, mortality data; It's Abysmal."***

In 1 April 2021, the "Science Plays the Long Game: But People Have Mental Health Issues Now", New York Times:

> *"I've reported on behaviour and Mental Health for 20 years.*

> *As I exit,* ***I can't help but wonder why researchers have placed so little emphasis on helping people in distress today. Little to improve the lives of the millions of people living with persistent mental distress. Almost every measure of our collective Mental Health; Rates of Suicide, Anxiety, Depression, Addiction Deaths, Psychiatric Prescription Use: Went The Wrong Direction".***

In Insel in "Healing", 2022, acknowledged Psychiatry's history of Abysmal Outcomes:

> ***"While we studied the risk factors for Suicide, the death rate had climbed 33%" Despite Increased Treatment; "Since 2001, prescriptions for Psychiatric Medications have more than doubled, with 1 in 6 American adults on a Psychiatric Drug."***

Its fundamental paradigm and tenets are scientifically invalid, and thus, no matter how many of its practices are reformed, **It Will Continue To Do More Harm Than Good. Psychiatry Should Be Abolished. There Is No Scientific Merit To Psychiatry."** - in Psychiatry's Nightmarish 2022 & Its Hysterical Defense Against Criticism", Mad in America, 8 October 2022.

Psychiatry Its Most Fundamental Characteristic Is Its Ignorance

"Psychiatry is a most unusual profession. Psychiatry has managed to sustain a tenuous claim to professional status over the course of 2 centuries, but even its limited success is anomalous, for **Its Most Fundamental Characteristic Is Its Ignorance: It Cannot Successfully Define the Object of Its Attentions; its Repeated attempts to Lay Bare the Aetiology of the Disorders It Oversees have Produced a Litany of Failures**; and **the Treatments it has offered have at best provided a measure of symptomatic relief, and at worst Have Been Appallingly Harmful. How have psychiatrists maintained their authority and their public identity as experts in the face of Repeated Failure?** they constructed a new "bible", the Diagnostic and Statistical Manual of Mental Disorders (DMS) of the American Psychiatric Association, and switched to biological reductionism." - in **"The Less You Know: How Psychiatrists have maintained their Authority in the face of Repeated Failure",** The Times Literary Supplement, 30 April 2021.

If The Brain Is Under Toxicity Then Its Mental Manifestations Are Disordered

> ***"When that portion of the Nervous Apparatus Becomes Disturbed through which The Mind in its Various Faculties during this Life Displays its Operations, we must expect that the Symptoms will again have an Exact Relation to the Function of the Organ Involved. The Work or Duty of the Brain being to Manifest the Operations of the Mind, it follows that, it being Diseased, the Mental Manifestations are Disordered."*** *- Dr S. S. Schultz, MD, in "Address in Mental Disorders; Analogies Between Insanity and Other Diseases", Transactions Medical Society of the State of Pennsylvania, 1885.*

When the brain is exposed to Toxic Substances (NeuroToxicity), its mental manifestations; including cognitive function, mood, and behaviour; are frequently disordered. Toxic substances, such as heavy metals (lead, mercury), organic solvents, and pesticides, can cross the blood-brain barrier, causing inflammation, oxidative stress, and structural damage to neurons, resulting in a spectrum of disorders known as Toxic encephalopathy.

> ***"While proper brain function requires the complex interaction of chemicals perpetually occupied in purposeful biochemistry, it is well established that certain Toxic substances have the potential to disrupt normal brain physiology and to impair neurological Homeostasis. As well as headache, cognitive dysfunction, memory disturbance, and other neurological signs and symptoms, disruption of brain function may also manifest as subtle or overt alteration in thoughts, moods, or behaviors. Over the last four decades, there has been the unprecedented development and release of a swelling repertoire of potentially Toxic chemicals which have the capability to inflict brain compromise. The ability of xenobiotics to induce clinical illness is well established."*** *- in "Toxic causes of mental illness are overlooked", NeuroToxicology, 29 November 2008.*

When Pharmaceutical Medication Toxicity affecting the brain (often termed Neuro-Toxicity) typically results in disordered mental, cognitive, and behavioral manifestations.

These manifestations are known as Psychiatric Side Effects (PSEs) or Drug-Induced Cognitive Impairment (DICI), which can range from mild, subtle confusion to severe delirium, psychosis, or coma.

When the brain is under Pharmaceutical Toxicity, its mental manifestations are commonly disordered. Pharmaceutical Toxicity or Neuro-Toxicity — whether from overdose, improper dosage, or drug interactions — can directly impair brain physiology and neurotransmission, causing symptoms that range from mild cognitive impairment to severe psychiatric conditions.

Psychiatric Side Effects: Are Pharmaceutical Medication Induced; Mental or Behavioural changes ranging from Anxiety and Depression to Psychosis, Mania, and Cognitive Dysfunction, mimicking Mental Illnesses

“Several Pharmacological Treatments used in Medicine can induce Psychiatric Side Effects that Mimic Diagnoses seen in Psychiatry.

Psychiatric Side Effects may occur at usual therapeutic doses, and also upon withdrawal or Intoxication.

Drugs that may lead to: Depressive, Anxious, or Psychotic Syndromes include: Corticosteroids, Isotretinoin, Levo-dopar Mefloquine, Interferon-a, and Anabolic Steroids, as well as some Over-The-Counter Medications. Psychiatric Side Effects are often difficult to diagnose, and can be Very Harmful to Patients.

Many Drugs Inhibit One or More Pathways of Hepatic Metabolism.

Psychiatric Side Effects can be Induced by the Pharmacological Treatment. The clinical presentation of Psychiatric Side Effects often resembles spontaneous psychiatric syndromes (ie, noniatrogenic, naturally occurring diseases).

Psychiatric Side Effects can occur at usual doses, in cases of intoxication, or during the days following withdrawal of a given treatment. Psychiatric Side Effects range from short-lasting Anxiety to Severe Confusion, and cases of Suicide. The clinical presentations of Depressive, Anxious, or Psychotic Psychiatric Side Effects; meet most criteria of the Diagnostic and Statistic Manual of Mental Disorders, 4th Edition (DSM-IV) for the corresponding spontaneous (noniatrogenic) syndromes. Therefore, Almost Any Psychiatric Symptom or Syndrome could be Considered as a Potential Psychiatric Side Effects, until one has proven the contrary.” - in “Psychiatric Side Effects of Medications Prescribed in Internal Medicine”, Dialogues Clin. Neurosci., 5 June 2003.

Drug-Induced Neurologic Conditions

“Drug Therapy also Contribute to the Emergence of New Disorders. Cerebellar Syndrome is a consequence of the disruption of normal function of the brain region that is responsible for coordination and balance. **Drug Induced Cerebellar Syndrome can be caused by a number of Drugs, including: Phenytoin, Lithium, Carbamazepine, certain Chemotherapeutic Agents, and Aminoglycoside Antibiotics. In addition to Loss of Coordination**, some patients may experience Dysarthria and Nystagmus. Many cases are reversible; however, **Permanent Cerebellar Syndrome can result**, especially with administration of high doses and concurrent use of agents conferring risk, such as Lithium plus Antipsychotics.

Deep Venous Thrombosis, Pulmonary Embolism, Myocardial Infarction, and Stroke have been reported with the use of Estrogens and or Progestin Therapy.

Reports of Cerebrovascular and other Vascular Effects from Antipsychotic Agents. A significantly increased incidence of transient Ischemic Attack, Cerebral Ischemia, unspecified Cerebrovascular Disorders, and Stroke has been reported.

Delirium Can Be A Neurologic Side Effect of Drugs.

It has been estimated that 30% to 50% of Parkinsonism cases May Be Caused by Drugs. Certain Drugs Can Induce Seizures in patients without a pre-existing seizure disorder." - in "Drug-Induced Neurologic Conditions", US Pharmacist, 22 January 2014.

Emotional Blunting

Emotional Blunting: Means you are numb to both positive and negative emotions. It's either a Side Effect of Medical Mental Health Treatment. **Emotional Blunting is a common Side Effect of Antidepressants, particularly SSRIs (Selective Serotonin Reuptake Inhibitors) and SNRIs (Serotonin-Norepinephrine Reuptake Inhibitors) are the Medical Trade first-line Antidepressants for Depression and Anxiety, affecting 40–70% of users, where Emotions Feel: Dull, Muted, or "Numbed."**

> ***"Scientists have worked out why common anti-depressants cause around a half of users to feel emotionally "blunted." According to the National Health Service, more than 8.3 Million patients in England received an Antidepressant Drug in 2021/22. A widely-used class of Antidepressants, particularly for persistent or severe cases, is Selective Serotonin Reuptake Inhibitors (SSRIs). These Drugs target Serotonin, a chemical that carries messages between nerve cells in the brain, and has been dubbed the "pleasure chemical." One of the widely-reported side effects of SSRIs is "Blunting", where patients report feeling Emotionally Dull, and No Longer Finding Things as Pleasurable, as they used to. Between 40-60% of patients taking SSRIs are believed to experience this side effect."*** *- in "Scientists explain Emotional 'Blunting' caused by common Antidepressants", Research, University of Cambridge, 23 January 2013.*

Antihistamine Medication Trigger Suicidal Thoughts

"Q: My dermatologist recommended I take Xyzal for Eczema because it was not supposed to make me sleepy the way Zyrtec did. I found that Xyzal made me just as sleepy and very depressed after just a low dose. I can't find Depression listed as a side effect. However, I get so Depressed that I'm frightened to take it anymore.

Have you heard of this side effect for either Xyzal (Levocetirizine) or Zyrtec (Cetirizine)?

R: **Drowsiness is listed as one of the most common reactions, along with Sore Throat, Fatigue and Dry Mouth. We were surprised to discover that Suicidal Ideation** has been reported as a reaction to Xyzal (Levocetirizine). In addition, a review of Medications Associated with Depression included Cetirizine (“Prevalence of Prescription Medications With Depression as a Potential Adverse Effect Among Adults in the United States”, JAMA, 12 June 2018).

Q: My doctor prescribed atenolol for high blood pressure. Over the years, I have experienced a lot of side effects: Fatigue, Brain Fog, Insomnia, Nightmares, Hair Loss. My Asthma Has Become Worse. My friends were having the same troubles. Then I started asking questions and learned that about 80% of them were also taking Atenolol. I Quit the Medication and Started Feeling Much Better. Several of my friends are weaning off their pills, too.” - **“Could an Antihistamine Trigger Suicidal Thoughts?”,** The Seattle Times, 28 August 2024.

Types of Antihistamine

1. Antihistamines that make you feel sleepy: Chlorphenamine (Piriton), Cinnarizine, Diphenhydramine, Hydroxyzine, Promethazine.

2. Non-drowsy Antihistamines that are less likely to make you feel sleepy: Acrivastine, Cetirizine, Fexofenadine, Loratadine.

Antihistamines Medication For Fever and Allergies Risk Serious Heart Problems

“Antihistamines (Terfenadine and Astemizole) were removed from the market because they Led to a Higher Risk of Potentially Serious Heart Problems. A large study found that Cetirizine was associated with an Increased Risk of Heart Arrhythmias. Antihistamines can interact with other Medicine or dietary supplements in ways that can be dangerous.

Drugs To Be Concerned:

1. Antifungal Medications, such as Ketoconazole. They can increase the effect of some Antihistamines.
2. Aspirin, which in large doses can cause ringing in the ears (Tinnitus), a Danger sign sometimes masked by Antihistamines.
3. Certain types of fruit juice, such as grapefruit juice, apple juice, and orange juice. They might make some second-generation Antihistamines less effective.

4. Any Drugs known to change the way the heart beats, such as Droperidol.

5. Medications used to improve breathing, such as Theophylline. They may raise the risk of Antihistamines side effects.

6. Certain Antibiotics, such as Erythromycin. They can increase the effects of Antihistamines.

7. Antacids that contain Aluminum or Magnesium. When taken within 15 minutes of Fexofenadine, these Antacids significantly decreased the effect of that Antihistamine.

8. The Stomach Acid reducer cimetidine, which increases the effect of Azelastine nasal spray.

People age 60 and older are more susceptible to the Side Effects of Antihistamines, especially Drowsiness. People older than 70 are at Greater Risk of Falls in General." - in "Using the Antihistamines", Consumers Reports, 2013.

Serious Mental Health Effects From Asthma and Allergy Pharmaceuticals

"FDA requires Boxed Warning about Serious Mental Health Side Effects for Asthma, and Allergy Drug Montelukast (Singulair). Risks may include Suicidal Thoughts or Actions. Consistent with our prior evaluations, a wide variety of Mental Health Side Effects have been reported, including Completed Suicides. Some occurred during montelukast treatment and Resolved After Stopping the Medicine. Other reports indicated that Mental Health side effects developed or continued after stopping Montelukast." - in "FDA, 13 March 2020.

"Currently Limited Knowledge About the Toxicological profile of Cardiovascular Drugs And Their Distribution." - in "Cardiovascular Drugs", Journal of Pharmaceutical and Biomedical Analysis, 20 January 2024.

Depression And Suicidal Thoughts Are Common Side Effect of Medication

"Do you take Medication for Acid Reflux, Allergies, Anxiety, Birth Control, Blood Pressure, or Pain? If so, Depression or Suicidal Thoughts may be listed as a side effect, and those side effects may occur far more often than we realized." *- in "Depression: Common Medication side effect?", Harvard Health Publishing, 16 July 2018.*

Asthma Medication
Causes Depression and Suicide

"Montelukast, is available as a generic medication, sold under the brand name Singulair among others. Montelukast was approved for Medical use in the United States in 1998. In 2019, concerns over neuropsychiatric side effects resulted in montelukast receiving a black box warning in the United Kingdom for behavioural changes, depression, and Suicidality. In 2023, it was the 20th most commonly prescribed medication in the United States, with more than 25 Million Prescriptions." *- in "Montelukast", Wikipedia, 29 June 2026.*

"Singulair it has been prescribed tens of millions of times for allergies and asthma but the Drug can trigger dangerous side effects.

The manufacturer had evidence the drug could affect the brain decades ago before the drug even went to market.

Desperate cries from an 8 year old boy:

"Mommy, Help! I Want to Die! I Hate Myself! I just want to die right now! Help me, Mommy. I want to die!"

Suicides just some of the potential Side Effects few people would Associate with an Allergy and Asthma Medication." - in "Singulair's Dangerous side effects: Allergy Medicine can Cause Depression and Suicides"*, CBS 5, 6 February 2021.*

"The Asthma Medication is known to cause behavioural and Neuropsychiatric disturbance. Have been linked to Suicidal Ideation. The Drug (Singulair) is known to cause Sleep Disturbance, behavioural changes and neuropsychiatric disturbance that may lead to Suicidal Ideation. Nine Newspapers recently reported on the case of a 5 year old boy who attempted suicide multiple times while taking and withdrawing from the medication. Current evidence also suggests possible associations between montelukast and anxiety, as well as specific subtypes of sleeping disorders, while published studies have also shown various rates (up to 62%) of reported neuropsychiatric events in children, including sleep disturbance, agitation, aggressiveness, mood changes and Attention-Deficit/Hyperactivity Disorder." *- in "Does Montelukast need a Warning label?", Royal Australian College of General Practitioners,15 January 2024.*

Medications With Depression Side Effect

“The most common ones listed:

1. Acid Reflux Medications: Omeprazole, Esomeprazole, Ranitidine.
2. Famotidine Allergy Medications: Montelukast and Cetirizine
3. Anxiety Medications: Alprazolam, Diazepam, and Lorazepam.
4. Sleep Medication: Zolpidem.
5. Birth Control and Hormone Pills, includes anything containing Estrogen.
6. Blood Pressure Medications: Atenolol, Metoprolol, Enalapril, and Quinapril
7. Pain Medications: Ibuprofen, Cyclobenzaprine, Hydrocodone.
8. Tramadol Antiseizure Medications: (often used for other reasons too) like Gabapentin, Topiramate, and Lamotrigine.” in “Depression: Common Medication Side Effect?”, Harvard Health Publishing, 16 July 2018.

I Knew That If I Took The Medication I would Be On Medication for the Rest of My Life And Never Be Well

“I went to Medical School to become a Psychiatrist and very much believed in Medication-Based Medicine. I became very good at prescribing.

What makes someone a good prescriber is that they have a confidence and a cavalier nature about their willingness to combine different Medications, to raise doses above even sanctioned FDA recommendations. It’s called cowboy pharmacology. I was very much that kind of a doctor.

Of course, any doctor you talk to, who’s left the conventional fold has done so because of their own personal experience. We don’t change our minds because of information. We change our minds because of experience. I had an experience of Radical Healing of a condition called Hashimoto’s Thyroiditis.

I only pursued that experience because I knew that; Medicine Had Absolutely Nothing To Offer Me, that I would be on Synthroid (Levothyroxine) Medication, For The Rest of My Life Feeling Never Quite Right.

I decided, very uncharacteristically, to pursue Natural Treatment.

When I watch my antibodies go from the high 2000’s, and my Thyroid-Stimulating Hormone go from 20 to completely normal with lifestyle-based interventions, I was actually really angry. I said: “Hold on a minute.

I’ve been a bookworm my whole life. I have never learned that this was possible.” I never had a mentor telling me that this was possible, that Nutrition has anything to do with anything. I decided to take it upon myself to go back to the data itself. I’ve always been very comfortable in PubMed.gov. I’ve spent every Saturday for 14 years. I’ve spent at least 4 hours there. I said: “What else am I not being told?” That was the beginning of the end of my $200,000 investment, blood, sweat and tears into a medical training that I basically don’t

use at all any more. I put down my prescription pad. It's been almost 9 years, I haven't started a patient on medication. It's a very similar story that I'm starting to hear in the realm of pain and pain science.

At first when the CDC came out and said that Narcotic Pain Medications are Not A Long-Term Fix, we have plenty of information.

The first people were very angry because:

> ***"You are taking my Medication away from me."***

People are building, around natural ways to heal and moving more toward what's called the Biopsychosocial model for healing pain as well as depression.

People have this wakeup call and say:

> ***"I never knew once I instituted other things, like healthy nutrition being one, into my lifestyle that this could affect my physical body, but also my Mental Health."***

Along the lines of Pain and Mental Health.

Knowing that the Central Nervous System is so important to the human body, having a healthy Central Nervous System." - Dr Dr Kelly Brogan, MD, Psychiatrist, in "Healing Depression and Chronic Pain", The Healing Pain Podcast, 10 August 2010.

The Medical Trade Crimes Against Humanity

"Article 7 - Crimes Against Humanity

1. For the purpose of this Statute, 'crime against humanity' means any of the following acts when committed as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack:

(e) Imprisonment or other severe deprivation of physical liberty in violation of fundamental rules of international law;

(f) Torture;

(k) Other inhumane acts of a similar character intentionally causing great suffering, or serious injury to body or to mental or physical health." - in "The Rome Statute" of the International Criminal Court; Adopted 17 July 1998, Diplomatic Conference in Rome; Entry into Force 1 July 2002, establishing the International Criminal Court (ICC); the permanent tribunal for serious international crimes.

Imprisonment & Torture of Healthy People: State Sponsor Terror

“Systematic attack directed against any civilian population are considered a crime against humanity. Intentionally causing great suffering, or serious injury to body or to mental or physical health.

Attack directed against any civilian population means a course of conduct involving the multiple commission of such acts pursuant to or in furtherance of a State or organisational policy to commit such attack. This group of patients may be subjected to involuntary commitment to a psychiatric department where they might be Restrained and Forced to Take Psychiatric Drugs or to receive Electroshocks against their will, and might be incarcerated for an undefined length of time. It is wrong and harmful to subject patients to coercion.

Psychiatrists Increase the Risk of Suicide and Violence

A Danish register study of **2,429 Suicides showed that The Closer the Contact With Psychiatric Staff;** which often involves forced treatment; the worse the outcome (**“Risk of Suicide according to level of psychiatric treatment:** a nationwide nested case-control study”, Soc Psychiatry Psychiatr Epidemiol, 2014).

Suicide Risk was 6 Times Increased for people receiving only Psychiatric Medication; 8 times for people with Psychiatric outpatient contact; 28 times for people with Psychiatric Emergency room contacts; 44 times for people who had been admitted to a Psychiatric Hospital. People who commit Suicide during or after an admission to Hospital do so because of conditions inherent in the Hospitalisation. There is little doubt that Suicide is related to both stigma and trauma, and that it is entirely plausible that the stigma and trauma Inherent in psychiatric treatment; particularly if involuntary; might cause people to kill themselves. Patients diagnosed with schizophrenia might be told that it is a lifelong disease that sometimes requires lifelong treatment with neuroleptics, and the forced treatment with these drugs may continue after they have been discharged from the hospital, under so-called community treatment orders. To motivate patients to take Drugs they Don’t like; because of their adverse effects, or are afraid of. **Psychiatrists have invented the Lie that the patients disorder is Caused by a Chemical Imbalance in their brain, and that a Drug will fix it.**

This Lie is Very Harmful, because it keeps many patients on the Drugs for decades. There are no drugs that decrease the risk of Suicide.

Guidelines recommend that patients at risk of Suicide be treated with Antidepressants, but they Double the risk of Suicide, both in children and adults. **Those who consider themselves Suicide Experts also recommend depression drugs. Anti-epileptics (psychiatrists call mood stabilisers); they Do Not Stabilise mood but sedate people, Double The Risk of Suicide** (FDA package insert for Lyrica, Pregabalin), often used for patients with severe psychiatric disorders.

The claim that incarceration is necessary and justified if psychiatric patients present a substantial danger to others, is also invalid. In Italy and Iceland, this cannot lead to forced admission to a psychiatric department, as it is considered a matter for the police, like for everybody else. **Psychiatric Drugs cannot protect against violence unless the patients are drugged into a zombie-like state. Several classes of psychiatric drugs increase the risk of violence.**

Psychiatrists Don't Cure: They Make Patients Worse

The effects of neuroleptics and of antidepressants are poor, no clinically relevant effect. **Electroshocks are also used as forced treatment but the effect is doubtful; and the harms are considerable and sometimes deadly.** It is therefore impossible to justify forced treatment with neuroleptics, antidepressants and electroshock. These treatments do not lead to substantial improvements in the condition. The fact, drug treatment often makes matters worse. They make it more difficult for people to function; the more psychiatric drugs are being used, the more people end up on disability pension for psychiatric reasons. The time trends are striking.

Forced Administration of Psychiatric Drugs

Forced Administration of Psychiatric Drugs may constitute a form of torture ("Torture and other cruel, inhuman or degrading treatment or punishment", U.N. General Assembly, 28 July 2008).

Patients often perceive forced admission as imprisonment and forced treatment as torture, the oversight of forced treatment comes under the convention prohibiting torture. Article 3, in the European Convention on Human Rights states: "Prohibition of torture. No one shall be subjected to torture or to inhuman or degrading treatment or punishment" (European Convention on Human Rights, Council of Europe", 2 October 2013).

In its 2013 report ("CPT/Inf/E (2002) 1 - Rev. 2013", European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT), Council of Europe, 2013), the Committee noted that that the admission of a person on an involuntary basis should not be construed as authorising treatment without his or her consent. **Patients have repeatedly said they felt the whole ordeal to be humiliating.** Psychiatric patients should be treated with respect and dignity, in a safe, humane manner that respects their choices and self-determination.

There is nothing psychiatric patients fear more than forced treatment.

The threat of mechanical restraints has been used to discipline them into taking drugs, which they didn't want because of their terrible harms.

If the patients live in a treatment home after discharge and refuse to take the pills, they might be kicked out of the facility and involuntarily readmitted to hospital, lose their social benefits, and even be denied access to a Mental Healthcare centre.

These laws are in themselves such a serious violation of basic human rights, with dire consequences in terms of Loss of Life and Permanent Suffering, that they constitute a Crime Against Humanity. The laws we have are not even respected. They are routinely violated all over the world but no one cares - even Supreme Court and Ombudsman decisions are being ignored.

I conducted both studies. I got access to 30 consecutive cases from the Psychiatric Appeals Board in Denmark and found that the law had been violated in every single case. Psychiatrists Had No Respect For The Patients Experiences and Views. In all 21 cases, where there was information about the Effect of previous Drugs, the Psychiatrists claimed a good effect; whereas none of the patients shared this view.

The Harms of Prior Medication Played No Role either in the Psychiatrist's decision making, not even when they were Serious.

We suspected or found Akathisia or Tardive Dyskinesia in 7 patients, and 5 expressed Fears of Dying because of the forced treatment.

We doubted the Psychiatrists' diagnoses of delusions in 9 cases.

According to the Psychiatrist, patients has a lack of insight into the disease, which is a symptom of their mental illness.

According to lawyer Jim Gottstein, **Psychiatrists, with the full understanding and tacit permission of the trial judges, Regularly Lie in Court to obtain involuntary commitment and Forced Medication Orders.** By using scientific data, Jim had previously convinced the Alaska Supreme Court that the government cannot drug someone against their will without first proving by clear and convincing evidence that it is in their best interests. Involuntary Medication orders were requested for all the patients, and we found that the legal procedures can best be characterised as a sham where the **Patients Are Defenceless.**

The patients experiences, fears, and wishes were Ignored in 26 cases, even when the patients were afraid that the **Neuroleptics Might Kill Them or when they had experienced Serious Harms such as tardive dyskinesia.**

Psychiatrists obtained Court Orders for Administering Drugs and dosages that were Dangerous. Neuroleptics Are Some of The Most Toxic Drugs Ever Invented And Shouldn't be Used For Anyone. But all over the world psychiatrists to use these Drugs." - Dr Peter C. Gøtzsche, MD, Psychiatrist, in "Forced Treatment in Psychiatry is A Crime Against Humanity", 30 January 2025.

The Medical Trade Has A Serious Mental Illness Problem

The Medical Trade should take Psychiatric Medication to overcome Mental Illness.

Mental Health Issues Are Highly Prevalent in the Medical Trade, with studies showing

29% of Medical Trade Doctors Have Depressive Symptoms; High Rates of Anxiety, Post-Traumatic Stress Disorder, a Mental Health condition with Nightmares, Severe Anxiety, Avoidance Behaviours, and a "Culture of Invincibility." Studies showing that up to 80% – 85% of Medical Trade Doctors have experienced Mental Health Issues.

> ***"Estimates suggest that, in the USA, 1 Doctor Dies by Suicide Per Day."*** *- in "Mental Illness And Suicide Among Physicians", Lancet, 4 September 2021.*

> ***"For the past 6 years I have experienced episodes of Depression and Anxiety. Throughout Medical School I took Antidepressants and had difficult times."*** *- in "I'm a Doctor, and I have a Mental Illness", BMJ, 10 June 2015.*

> ***"A Medical Protection survey of more than 600 UK members reveals that 85% Have Experienced Mental Health Issues: Stress 75%; Anxiety 49%; Low Self-Esteem 36%; 32% have had Depression during their Medical Career, while 13% (1 in 10) Experienced Suicidal Feelings." - in "85% of Doctors have experienced Mental Health Issues****, reveals Medical Protection survey", Medical Protection, 16 July 2015.*

The Concept of Disease

> ***"The concept of disease is fast replacing the concept of responsibility. With increasing zeal Americans use and interpret the assertion "I Am Sick" as equivalent to the assertion "I am not responsible"."*** *- Dr Thomas S. Szasz, MD, Academic and Psychiatrist, in "The Untamed Tongue: A Dissenting Dictionary", 1990.*

The Medical Trade Art Is Called: Medicine:

Medicine is the Art to Suppress Symptoms and Pain by the use of Synthetic Chemical Products, which are known to be Toxic to the Body Organs, causing stress to the Body System. Medicine, the Art of the Medical Trade is the attempt to suppress pain, by the use of Poison substances, taken by the circulatory systems of the body, which they call it "Pharmaceutical Medications", in the vain hope that the "unknown causes of pain" will vanish.

Once people start taking Pharmaceutical Medications, they stay on them for the rest of their lives. Poisoning their systems, Pill by Pill, Day by Day, then, they end up in a Surgery Table, then, in Death.

No Free Will, No Responsibility, Just Chemical Imbalances

"We do not have an epidemic of mental illness.
We have an Epidemic of Psychiatry.
You eat too much, it's a disease, an addiction.
You smoke too much, it's a disease.
You are too unhappy, it's a disease.
You are too thin, it's a disease.
Too fat, it's a disease.
You have too little sex, it's a disease.
You have too much sex, it's a disease.
No free will, it's all chemicals. No self discipline. No self-control.

A chemical imbalance meshes very well with the idea that you give a drug which restores the balance. It's a story, a mythology, a fable. The child doesn't perform the way he should or behaves he should. He is not responsible. Some chemicalist will give him a chemical. You hear day in and day out on television that this is a mental illness and that's a mental illness and Zoloft is advertised.

Now this is it's not just psychiatry. It's the whole psychiatricization of the culture. Psychiatrists are getting more and further away from this human to human touch, and they're becoming more quacks.

They talk and act and impersonate doctors.

They talk about diagnosis and treatments, the brain and all this kind of stuff about which they know nothing. Zero. It's not Science, it's Politics and Economics. That's what psychiatry is. Politics and Economics, Behaviour Control. It is not science." - Dr Thomas S. Szasz, MD, Professor of Psychiatry Emeritus, co-founder of the Citizens Commission on Human Rights (a psychiatric/mental health watchdog), CCHR, 30 July 2010.

Mental Illness Alone: Not Linked To Violence

"A new study claims that the number of violent crimes committed by mentally ill patients should not be blamed on the illness itself; but rather on the abuse of drugs and alcohol. Researchers from Britain, and Sweden who studied rates of violent crime among People With Severe Mental Disorders, said it appeared that: **The Higher Risk of Substance Abuse is the Key.** They found that while rates of violent crime are higher among people with bipolar disorder and schizophrenia than in the general population, they are similar in people with mental illness and those who abuse substances but are not mentally ill. When the results were adjusted to removed the influence of alcohol or illegal Drug abuse, rates of violence among Psychiatric Patients were barely changed from levels in the general population.

> ***"Substance Abuse Is Really The Key Mediator of Violent Crime. If you take away the Substance Abuse, the Contribution of the Illness Is Very Minimal. It is probably more dangerous to be walking outside a Pub, on a late night; that it is to be walking outside a hospital where mental health patients are being released."*** *- Dr Seena Fazel, MD, FRCPsych, Oxford University's Department of Psychiatry, who led a study.*

In the "Archives of General Psychiatry Journal", Fazel said; **public perception that the mentally ill are a threat had led to large numbers of psychiatric patients being put into secure hospitals.**

> ***"There has been a sort of re-institutionalization of patients with mental illness; under the guise that they are dangerous."*** *- Dr Seena Fazel, MD, FRCPsych*

Since rates of mental illness, as well as rates of violence and of alcohol and drug abuse are similar in Sweden to the rest of Europe and the United States, the findings were likely to be applicable to other countries." - in "Mental illness alone not linked to violence", Nursing Times, 7 September 2010.

Relation of Intestinal Stasis to Epilepsy

> ***"A further Factor must surely be The Subversion of the Hepatic Functions by the High Acid, and Toxin Content Arriving By The Portal Channel. The Destruction of Mucosal Cells in the Colon on a wide scale in Stasis releases into the Vascular System Toxic Agents; which, coming from such an origin, must have a specific affinity for mucosal cells at a distance. Only thus can we explain the frequency and the chronicity of catarrh of remote mucous membranes (nasal, bronchial, uterine); which is so Constant a Feature in Chronic Stasis cases, and which proves so intractable until the main Colonic Reservoir of these Toxins is Overhauled and Repaired. Closer Study of the Leaking Septic Tank; will yet yield a most Fruitful Contribution to medical science, and a Further Step to the Solution of Many Problems Hitherto Accepted as Insoluble. These will almost certainly include a Large Proportion of Chronic Functional Disorders within the province of Neurology and Psychiatry, and with them the problem of Epilepsy will certainly be advanced definitely nearer to complete solution."***
>
> *- Dr A. White Robertson, LRCP, S. Edin., Lieutenant-Colonel, RAMC, in "Chronic Intestinal Stasis and Epilepsy", British Medical Journal, 27 December 1924.*

Study Links Mental Illness To Early Death in People With Epilepsy

"The findings reveal a striking correlation between premature death and Mental Illness in these patients. People with Epilepsy were 4 times more likely to have received a Psychiatric Diagnosis compared with the general population. The figures are considerably higher than previously thought and have important implications for **Epilepsy Management. The study part-funded by the Wellcome Trust, and published in "Lancet Medical Journal."** Throughout the course of the study, 8.8% of people with Epilepsy died, compared with 0.7% of people from the general population. These accounted for almost 16% of deaths. **75% of these deaths were amongst patients who also had a Psychiatric Diagnosis.**

The odds of a person with epilepsy committing suicide during the study were 4 times higher than the general population.

> *"This is the largest report to date to look at Psychiatric Associations in Epilepsy and their Contribution to Premature Mortality. Our finding that three quarters* ***(75%) of suicide and Accident Deaths in Epilepsy also had a Diagnosis of Mental Illness*** *strongly identifies this as a high-risk population to focus preventative strategies and More Intensive Treatment On." - Dr Seena Fazel, FRCPsych, Wellcome Trust Senior Clinical Research Fellow at the University of Oxford, led the study.*

> *"Although it is well-recognised that psychiatric and addiction disorders occur in epilepsy, in high-income Western countries, epilepsy is often managed by neurologists only.* ***The findings from this study would suggest that clinical epilepsy services should review their liaison with Psychiatric and addiction services as a priority."*** *- Professor Charles Newton, MD, Department of Psychiatry at Oxford University*

The study was funded by "The Wellcome Trust"; Swedish Prison and Probation Service; Swedish Research Council." - in "Study links mental illness to early death in people with epilepsy", University of Oxford, 22 Jul 2013.

Antipsychotic Medication Associated With Reduced Rate of Violent Crime

"People who use Antipsychotic Medication (such as Clozapine or Risperidone) to treat psychiatric illness are nearly half as likely to commit a violent crime compared to when they are not using such Medication, according to results published in "The Lancet." A team of researchers led by Dr Seena Fazel, MD, Oxford University, used Swedish national health registries to study the Psychiatric Diagnoses. The use of mood stabilising Drugs (such as Lithium or Carbamazepine) is also associated with a reduced rate of violent crime,

although the Reduction Is Less Pronounced, And Only In patients with bipolar disorder. Antipsychotic and Mood stabilising Medication are used to treat a variety of disorders, but are most commonly associated with the treatment of schizophrenia, bipolar disorder, and Related Disorders that Affect up to 2% of the General Population. There Has Been Very Little Evidence for these Drugs Effects on Real-World adverse outcomes, such as reducing violent behaviour, Despite Increasing Prescription Rates in many countries. The 2 types of Medication are often combined, The Researchers Found No Evidence that combining the Drugs Has Any Further Effect On Reducing Violent Crime. The Study Was Funded by "The Wellcome Trust"; Swedish Prison and Probation Service; Swedish Research Council" - "Antipsychotic medication associated with reduced rate of violent crime", Press Release, The Lancet, 7 May 2014.

The Wellcome Trust

"Sir Henry left the entire share capital of his Pharmaceutical Company, the Wellcome Foundation, to establish the Trust. From 1966 to 1986, the Wellcome Foundation expanded dramatically, and in 1986, the **Wellcome Foundation was floated on the Stock Market as Wellcome plc, Eventually Becoming Part of GlaxoSmithKline.** The Trust funds outstanding researchers from all over the world and invests in state-of-the-art facilities to turn ideas into discoveries and discoveries into new treatments that transform health care." - in "Wellcome Trust: A Long-Term Perspective", Stem Cells Translational Medicine, 26 January 2012.

Increased Rate of Suicidal Tendencies Revealed

"The BBC has once again launched a scathing attack on GlaxoSmithKline, and accused the Drugs Giant of covering up evidence that its Antidepressant Seroxat had performed badly in clinical trials on teenagers suffering from the condition. The BBC Panorama had seen internal Company emails which reveal that GSK distorted trial results of Seroxat (Paroxetine), in the USA as Paxil, and in doing so Covering Up A Link with Suicide In Teenagers. The allegations are similar to those made by BBC Panorama in 2002 and 2004.

The claims centre around GSK's biggest clinical trial of Seroxat on children in the 1990's; called Study 329 and focused on the role of Child Psychiatrist Neal Ryan of the University of Pittsburgh who was paid by GSK as a co-author of said study. The programme noted that in 2002, Dr Ryan also gave a talk on Childhood Depression at a medical conference sponsored by GSK and told a Panorama reporter Shelley Jofre, that it probably lowered rather than raised suicide rates. No suicides were reported in any of the 9 paediatric trials and when reviewed individually, none of them were considered by the firm or independent investigators to show a clinically meaningful increase in the rate of suicidal thinking or attempted suicide.

It Was Only When All The Data Became Available, At The End of The Research Programme, and were analysed together Was An Increased Rate of Suicidal Tendencies Revealed." - "GSK Accused Again by BBC of Distorting Seroxat Data", Pharma Times, 30 January 2007.

GlaxoSmithKline Pushes Depression Drug

"Paroxetine (Paxil) Antidepressant. Within days of starting on paroxetine, Stephanie noticed a dramatic change in her daughter; she became more confident. But with the confidence came aggression and worse: "One day in the kitchen her sleeve pulled up slightly and I noticed that there were cut marks on her left arm. I couldn't believe my eyes. She was obviously self-harming while she was on the Drug, something she's never ever done before." GlaxoSmithKline, the second largest Drug Company in the world, which recorded 2006 sales of over $45 Billion, had begun a series of clinical trials in the mid-1990s to test whether paroxetine would work in depressed children. The BBC obtained confidential case reports from Study 329:

> ***"13 Days after starting paroxetine; the patient became very angry. He punched pictures, broke glass and sustained lacerations that required 6 sutures; he expressed hopelessness and possible suicide thoughts. The patient began exhibiting symptoms of disinhibition, grandiosity and expansive mood around week 4; after 8 weeks; the patient became agitated and said she would kill herself. 11 days after starting paroxetine the patient was hospitalised for psychosis with auditory hallucinations and superficial cuts."***

Yet this was a Drug that was supposed to make children happier and reduce the risk of Suicide. The company knew it had a problem. In an Internal Memo to senior executives in 1998 the Product Director for Paroxetine admitted:

> ***"The results of the studies were disappointing. The possibility of obtaining a safety statement from this data was considered but rejected. Consultation of the marketing teams confirmed that this would be unacceptable commercially."***

In other words, publishing the data in full would undermine the Drug's safety profile, and put profits at risk. It took 5 years for this information to reach the public domain, as a result of the BBC Investigation. In the intervening years Doctors continued to prescribe a Drug to tens of thousands of vulnerable children, ignorant of the fact that it had not been shown to work and was harmful to some." - in "Doctoring the Evidence: GlaxoSmithKline Pushes Depression Drug", Corp Watch, 30 July 2007.

GlaxoSmithKline Fined $3 Billion Bribe to Increase Drugs Sales

"The Pharmaceutical Group GlaxoSmithKline has been fined $3 Billion after admitting bribing Doctors, Encouraging the Prescription of unsuitable Antidepressants to children. Admitted corporate misconduct over the Antidepressants Paxil, Wellbutrin and Advair. Psychiatrists flown to 5-Star Hotels, All-Expenses-Paid Trips, speakers paid $2,500. GSK also paid for Articles on its Drugs in Medical Journals, "Independent" Doctors, hired to Promote Treatments. Paxil; only approved for adults; was promoted as suitable for children and teenagers; Despite Trials That Showed It Was Ineffective. Children and teenagers are only treated with Antidepressants in exceptional circumstances Due To An Increased Risk of Suicide." - in "GlaxoSmithKline fined $3 Bn after bribing doctors to increase Drugs Sales", Guardian, 3 July 2012.

The Malevolence Of The Medical Trade

"The Fundamental Attribute of nearly All the Major Health Care Sectors is the: Relentless Pursuit of Profit Without Consideration of the Larger Social Consequences.

Amoral Greed Of The Medical Trade

Some may call that "Amoral Greed."

Add to this reality the fact that some health care competitors also act in a manner that is Clueless; while others exhibit varying levels of Laziness, Arrogance, and Spinelessness." - in **"The Malevolence of All Health Care Sectors",** The Philadelphia Inquirer, 14 January 2015.

Pharmaceutical Drugs: Destroy Kidneys Sepsis Follows And Death Occurs

"Eleanor Riese, passed away on 6 April 1991, at the age of 47. Her Death was attributed to Renal Failure from the use of Psychiatric Drugs; that caused: Repeated, and Painful Urinary Tract Infections, Leading to Sepsis and Death. Born and raised in San Francisco, Eleanor graduated from George Washington High School in 1960. She suffered from meningitis as a child and, during her early adult years, was diagnosed with schizophrenia. In June 1985, Eleanor was admitted to the hospital as a voluntary mental health patient. There she began a persistent, legally significant fight for the basic right of informed consent and the right of competent adults, absent an emergency, to refuse Psychiatric Medication during short-term civil commitment. When Eleanor tried to exercise her right of informed consent and avoid adverse effects, she was forcibly injected and placed on a 14-day LPS (Lanterman-Petris-Short

Act) hold. Hospital staff attributed her dry mouth; so severe that she had difficulty speaking, dizziness, swollen feet, shaking, memory loss and increased seizures; to her psychiatric diagnosis and delusions, but Eleanor knew it was the drugs. During this same hospitalization, Eleanor advocated to get others released from seclusion and restraint; a practice she abhorred; referring to the seclusion room as the "torture chamber". *- in "The Eleanor J. Riese Story", San Francisco Mental Health Clients' Rights Advocates, 2018.*

Killed By Pharmaceutical Medication

"Californians admitted to hospital; and who were capable of weighing up the Medication Risks; had no right to refuse, and no right to be consulted. Eleanor's Premature Death, Killed by the Medication she had been forced to take." *- in "British Psychological Society", 30 November 2018.*

Medical Trade Pharmaceuticals Induce Severe Urinary Tract Infection By Causing Damage The Kidneys; Leads to Urosepsis, Septic Shock, And Death

All Medical Trade Medication needs to be Metabolised by the Liver and excreted by the Kidneys, thus is both Intoxicates the Liver, and Damages the Kidneys. A Damaged Kidney can lead to Urosepsis, Septic Shock and Death.

"Most Drugs are Xenobiotics, ie, chemical substances not naturally produced by the body. These processes allow for the chemical modification of drugs into their metabolites and are known as drug metabolism or metabolic biotransformation. These metabolites are the byproducts of drug metabolism, and can be characterized by active, inactive, and Toxic Metabolites.

Toxic Metabolites are biochemically active compounds similar to active metabolites but Have Various Harmful Effects.

Drug metabolism occurs at a specific location in the body. This phenomenon is called first-pass metabolism. First-pass Metabolism primarily occurs in the Liver.

The Kidneys are Primarily responsible for the Excretion of Drugs from the body; however, lipophilic Drugs readily cross the cell membrane of the kidney tubules and are reabsorbed into the blood.

Therefore, lipophilic Drugs are first Metabolized in the Liver before Excretion of the Drug can be possible." - in "Drug Metabolism", StatPearls, 17 August 2023.

Medical Trade Pharmaceutical Medications can increase the risk of developing Urinary Tract Infections; can progress to Sepsis (Urosepsis); a life-threatening response to infection.

Medications Associated with Increased Urinary Tract Infection Risk

Several classes of drugs can contribute to Urinary Tract Infection development, either by suppressing the immune system, affecting bladder function, or changing urine composition:

1. Antibiotics: Frequent use of Antibiotics can lead to the development of resistant bacterial strains.
2. Anticoagulants: Pharmaceutical Medications like Aspirin and Warfarin may increase the severity of a Urinary Tract Infection.
3. Anticholinergics and Opioids: These can cause urinary retention or inhibit proper bladder emptying, creating a stagnant environment for bacteria.
4. Inhibitors (Gliflozins): Used for diabetes, these drugs reduce glucose reabsorption, leading to higher sugar levels in the urine, which encourages bacterial growth.
5. Immunosuppressants: Drugs such as Glucocorticoids or those used in Chemotherapy reduce the body's ability to fight infections.
6. Opioid Pain Relievers: Morphine and fentanyl can affect the bladder and lead to urinary retention.
7. NSAIDs: Non-steroidal anti-inflammatory Pharmaceutical Drugs like Diclofenac are linked to an increased risk of Pyelonephritis (Kidney Infection).

Women Are More Vulnerable

Anatomy: Women have a shorter urethra than men, making it easier for bacteria to reach the bladder.

Hormonal Changes: Post-menopausal women are at higher risk due to a decline in estrogen, which changes the urinary tract and makes it more vulnerable to infection.

Birth Control: The use of diaphragms and spermicides can disrupt normal vaginal flora and increase the risk of Urinary Tract Infections.

"Bacterial Urinary Tract Infection, and are classified into lower or upper urinary tract infections. The Most Serious Consequence of an ascending Urinary Tract Infection, which is directly Life-Threatening, may be the development of Bacteraemia; Sepsis, and consequently, Septic Shock.

It results from the fact that uropathogens may cross the tubular epithelial barrier, which is characterized by increased permeability in inflammatory conditions, and entering the Blood stream. It triggers the complex Inflammatory patient's response to infection; Systemic Inflammatory Response, leading to Multi-organ Dysfunction. Urinary Tract Infection; are considered to be an Important Etiological factor for the Development of Chronic Kidney Disease.

Urinary Tract Infection; is associated with some iatrogenic factors, including the use of certain Medications, that contribute to Urinary Tract Infection development.

Immunosuppressants Posing a Risk of Increased Colonisation of the Urinary Tract by Pathogens

Immunosuppressive Drugs:

The immunosuppressants include glucocorticoids, cytostatic drugs (cyclophosphamide, azathioprine), drugs that act on immunophilins.

Their Use Is Accompanied by Undesirable Effects, the most common of which is the Increased Risk of Serious Infections, and possibly involving the urinary tract.

The Pharmacological action of the Drug, idiosyncratic and intolerant reactions, pseudoallergic reactions, and Drug interactions. Taking into account the fact that most Drugs and their metabolites are excreted in the urine (renal clearance is the most important component of their total clearance), the kidney and urinary tract are especially predisposed to potential Drug Damage.

Specific Drug-Induced; Urological, and Nephrological Problems Caused by Drugs:

1. Renal Calculi Formation
2. Crystalline Nephropathy
3. Erectile Dysfunction
4. Urinary Retention
5. Urinary Incontinence
6. Interstitial Nephritis
7. Drug-induced Glomerulonephritis
8. Hemodynamic-induced Kidney Hypoperfusion
9. Acute Kidney Injury.

Drugs Affecting Micturition and Reducing Bladder Emptying

Another group of Drugs Predisposed to the development of a Urinary Tract Infection are drugs that impair the emptying of the bladder and contribute to postvoidal residual urine. Urinary Tract Infection episodes may more easily develop under the resulting conditions of prolonged urinary stagnation.

These Drugs include compounds with cholinolytic (anticholinergic) activity, such as antimuscarinic bronchodilators, neurogenic antispasmodics, tricyclic antidepressants and antipsychotic Drugs. These Drugs may impair the complex parasympathetic control of the micturition and the contraction of the detrusor muscle, thus affecting the voiding phase. Also, some antiarrhythmics, antiparkinsonian agents, benzodiazepines, opioids, calcium channel blockers or pseudoephedrine affect urinary flow due to the bladder muscle relaxant effect and extending the storage phase. Thus, all of the above mentioned agents may contribute to the acute, emergency urinary retention that requires immediate intervention. The Accumulation of vasoactive pro-inflammatory mediators (signaling molecules; including histamine, cytokines, and prostaglandins), may ultimately lead to hypotension and hypoperfusion and finally the development of septic shock. Elderly patients are expected to exert a higher risk for Drug-Induced urinary retention; since they often suffer from additional disorders. Some observational studies suggest that concomitant Drugs may be a Causative Factor in up to 10% of urinary retention episodes.

Drugs Contributing to Urinary Stone Development and Urinary Retention

Drugs Cause Urinary Crystallisation, with the possible subsequent development of Urolithiasis, which is associated with an increased risk of obstructed outflow and stagnation of urine.

There are 2 mechanisms accounting for drug-induced kidney stone development:

1. **Some Drugs; and their metabolites crystallize in the urinary tract.**
2. **Some Drugs Cause Metabolic Disturbances contributing to the Crystallization of endogenous lithogenic substances that are physiologically present in the urine.**

The detailed characteristics of the pathophysiology of urolithiasis and the Drug-Induced Urinary Stones can be found in one of the previously published review (Kidney Stone Disease with special regard to Drug-Induced Kidney Stones", Wiad. Lek. 2020).

The Obstructed Outflow of Urine Favours Increased Bacterial Colonization. Urinary Tract Infection pathophysiology, the free outflow of urine, and "washing out" of bacteria colonizing the lower urinary tract is an important factor in reducing the development of infections. Disruption of this mechanism promotes Urinary Tract Infection development. The occurrence of an infection is facilitated by the patient's Pharmacotherapy. Thus, urinary tract infections may be a urological manifestation of Adverse Drug Reactions." - in "Drug-Related Urinary Tract Infections", Journal of the Polish Medical Association, July 2021.

Psychiatric Diagnoses Are Scientifically Worthless

"A new study ("Heterogeneity in Psychiatric Diagnostic classification", Psychiatry Research, September 2019), has concluded that: **Psychiatric Diagnoses are Scientifically Worthless as tools to identify discrete Mental Health Disorders. Diagnostic Labels create the illusion of an explanation, they are Scientifically Meaningless and can create stigma and prejudice.**

Perhaps **it is time we Stopped Pretending that Medical-Sounding Labels contribute anything to our understanding of the complex causes of Human Distress,** or of what kind of help we need when distressed. **Diagnoses frequently and uncritically reported as "real illnesses", are in fact made on the basis of internally inconsistent, confused and contradictory patterns of largely arbitrary criteria."** - in **"Study finds Psychiatric Diagnosis to be Scientifically Meaningless"**, University of Liverpool, 8 July 2019.

All Pharmaceutical Medications Are Dangerous And Known To Cause Serious Harm

Each year, 4.5 Million Americans visit a physician's office or emergency room because of side effects related to Prescription Medications.

> ***"The occurrence of adverse events due to unsafe care is 1 of the 10 leading causes of death and disability in the world. In high-income countries, it is estimated that 1 in 10 patients is Harmed while receiving Hospital Care, and more than 3 Million Deaths occur Annually due to unsafe care. In low-to-middle income countries, as many as 4 in 100 people Die from unsafe care. Above 50% of Harm (1 in every 20 patients) is preventable; half of this Harm is Attributed to Medications. As many as 4 in 10 patients are harmed in primary and ambulatory settings."*** *- in "Patient Safety", WHO, 11 September 2023.*

Harmful And Deadly Medications

"1. Hallucinations: Types of Hallucinations include: Visual, Auditory, Olfactory, Tactile, Gustatory, General Somatic. Psychiatric Medications Causing Hallucinations: Olanzapine (Zyprexa), Quetiapine (Seroquel), Haloperidol (Haldol), Zolpidem (Ambien), Eszopiclone (Lunesta), Clonazepam (Klonopin), Lorazepam (Ativan), Ropinirole (Requip), and some Seizure Medications. Cephalosporins, and Sulfa Drugs (2 Common Classes of Antibiotics), are Associated with Causing Hallucinations.

2. Memory Loss: Memory Loss is a Side Effect of Medications; most notable Nonbenzodiazepine Sedative Hyponotics: Ambien, Lunesta, Sonata. Sometimes Cause Amnesia, and Trigger Potentially Dangerous Behaviours. Medications in Memory Loss: Benzodiazepines, Statins, Seizure Medications, Opioids, and Incontinence Drugs.

3. Blood Clots: Prescription Medications Associated with Blood Clot Formation: Female Oral Contraceptives, and Hormone Therapy Drugs. All Carry an Increased Risk for Blood Clot Formation. All Testosterone replacement products, share the same Risk for Blood Clots.

4. Compulsive Behaviours: Prescription Medications Associated with Compulsive Behaviour: Requip; Pramipexole (Mirapex).

5. Stevens-Johnson Syndrome: Stevens-Johnson Syndrome Is Life-Threatening: Lamotrigine (Lamictal) has a relatively high incidence of Stevens-Johnson Syndrome. Allopurinol (Zyloprim), Acetaminophen (Tylenol), Ibuprofen (Motrin), Naproxen (Aleve), Sulfa Drugs, Penicillin, Barbiturates, Anticonvulsants.

6. Birth Defects: Birth Defect occurs while a baby develops in the mother's body; 1 in every 33 babies in the United States are born with a Birth Defect. Thalidomide is one of the oldest and well-known teratogenic medications. Known teratogenic prescription medications include warfarin, divalproex (Depakote), Paxil, topiramate (Topamax), methotrexate (Rheumatrex), angiotensin-converting enzyme inhibitors, angiotensin II receptor blockers, nonsteroidal anti-inflammatory drugs, oral contraceptives, statins, and tetracyclines.

7. Cancer: Tamoxifen (Nolvadex), which is used to treat Breast Cancer, was found to increase the risk of Uterine Cancer. Pioglitazone (Actos) has an increased risk of Bladder Cancer. All Glucagon-like Peptide-1 Receptor Agonists, have a the risk for Thyroid C-cell Tumors. Metronidazole (Flagyl) is carcinogenic.

8. Suicidal: Paxil could lead to Suicidality in patients. All antidepressants increase risk of suicidal thinking and behaviour in children, adolescents, and young adults with major depressive disorder and other psychiatric disorders. Medications that may be associated with suicidal thinking and behavior include Montelukast (Singulair), Isotretinoin (Claravis), Varenicline (Chantix), Mefloquine (Lariam).

9. Death: Sudden Cardiac Death: Antipsychotics such as Seroquel, Zyprexa, Risperidone (Risperdal) are associated with Sudden Cardiac Death, with

increased incidence in the elderly, and those taking other Cardiac Medications in combination. Antiarrhythmic Agents that list Sudden Cardiac Death; include: Sotalol (Betapace), Amiodarone (Cordarone), Procainamide (Procanbid). Morphine and Adderall, have increased risk of Sudden Death." - in "10 Scariest Prescription Drug Side Effects: 10 Harmful and Potentially Deadly Side Effects of Commonly Prescribed Medications", Pharmacy Times, 2 February 2016.

Are Epidemics & Vaccinations Billion Dollar Scams - 2010

"Attention Deficit Hyperactivity Disorder (ADHD) is a manufactured disease that does not fit into this book, because it is not an infectious disease, nor does it involve a Vaccine, but is a matter of brain development in children that is deliberately interfered with and is not allowed to develop to its fullest capacity.

Attention Deficit Hyperactivity Disorder is being Treated by Drugs by Psychiatric Dictate so that today 44 Million people, some now parents, are still affected, and are addicted to the drugs (supposedly) intended to help them." - in **"Are Epidemics and Vaccinations Billion Dollar Scams"**, 2010.

> ***"I repeatedly contrast bodily disease with so-called mental disease, which I classify as non-diseases. Because the mind is not a bodily organ, it can be diseased in a metaphorical sense. Since there is no objective method for detecting the presence of mental disease, there is no such method for establishing its absence. The claim that a Mental Disease is a Disease of the Brain Is Profoundly Contradictory: a disease of the brain is a disease of the brain, Not A Mental Disease."*** *- Psychiatry Professor Dr Thomas S. Szasz, MD, in "Pharmacracy: Medicine and Politics in America", 2001.*

> ***"ADHD, in all 5 Million children on these Drugs (for hyperactivity) are normal.***
> ***The country has been led to believe that all Painful Emotions are a Mental Illness, and the leadership of the American Psychiatric Association, knows very well that they are representing it as a disease when there is No Scientific Data To Confirm Any Mental Illness."*** *- Dr Fred A. Baughman Jr., MD, in "Insight Magazine", 28 June 1999.*

> ***"The day will come, when he who bleeds, or administers poisons to his fellow creatures, will be punished for a misdemeanour."*** *- Dr W. Evans, MD, in "A Pure Mind in a Pure Body, that is Health", 1863.*

> ***"Oh let the wickedness of the wicked, come to an end; but establish the just: for the righteous God trieth the hearts and reins. He made a pit, and digged it, and is fallen into the ditch, which he made. His mischief shall return upon his own head, and his violent dealing shall come down upon his own pate."*** *- Psalm 7:9 & 7:15-16*

Fatal Adverse Drug Reactions In Hospital Patients

*"**Our most surprising result was the large number of fatal Fatal Adverse Drug Reactions (ADR). We estimated that in 1994 in the United States 106,000 hospital patients died from an ADR. Thus, we deduced that ADRs may rank from the 4th to 6th leading cause of Death. Even if the lower confidence limit of 76,000 fatalities was used to be conservative, we estimated that ADRs could still constitute the 6th leading cause of Death."** - in "Incidence of Adverse Drug Reactions in Hospitalized Patients", JAMA, 15 April 1998.*

Medications Kill In Large Numbers

"Prescription Drugs Are the 3rd Leading Cause of Death.

Around 100,000 people Die each year in the United States because of the Drugs they take, even though they take them correctly. Another 100,000 Die because of errors.

Organised Crime in The Drug Industry

When I found out that our prescription drugs are the 3rd Leading Cause of Death, I also realized that a major contributing cause of this was Widespread Crime in the Drug Industry. The most common criminal offences were illegal marketing recommending drugs for off-label uses, misrepresentation of research results, hiding data on harms, and Medicaid and Medicare fraud. In 2010, a jury found that the world's largest Drug Company, Pfizer, had violated the Organized Crime act and had engaged in a racketeering conspiracy over a 10-year period. The other large Drug Companies have committed similar Crimes as Pfizer but they have settled, thereby avoiding a possible verdict of organized crime. Many of the crimes have involved Psychiatric Drugs and bribery of psychiatrists, and the pervasive illegal promotion of these Drugs have carried a terrible death toll. I have estimated, based on the sales and a meta-analysis of the randomized trials of antipsychotics that showed that the risk of death was twice as high on drug as on placebo, that just one antipsychotic drug, olanzapine, has Killed 200,000 people. The newer antidepressant drugs, selective serotonin reuptake inhibitors (SSRIs), also lead to many deaths." - Dr Peter C. Gøtzsche, MD, in **"Our Prescription Drugs Kill Us In Large Numbers"**, Polish Archives of Internal Medicine, October 2014.

The Corruption of Medical Science

"Joyce Ann Hafford, learned that she was 4 months pregnant (April 2003), Was Urged by her Obstetrician to take an HIV Test. She agreed, even though She Was Healthy, and had no reason to think she might be HIV positive.
The Test Result came up Positive. Hafford was immediately referred to an HIV/AIDS specialist, Dr Edwin Thorpe, MD who happened to be one of the Principal Investigators Recruiting Patients for a Clinical Trial at the University of Tennessee Medical Group that was sponsored by the Division of AIDS; DAIDS is the chief branch of HIV/AIDS research within the National Institutes of Health (NIH).
Within 72 hours, she had a very bad rash, welts all over her face, hands, and arms.
A rash is a very bad sign, but They Didn't Seem Alarmed At All. Her Health Started to Deteriorate From the Moment she Went on the Drugs.
She was always in pain, constantly throwing up, and finally she got to the point where all she could do was lie down. They Told Us How Safe The Drug Was, They Never Attributed Her Death To The Drug Itself, At All. They said that her disease, AIDS, must have progressed rapidly. There was a liver biopsy, however, which revealed, according to internal communiqués of DAIDS staff, that Hafford had died of liver failure brought on by Nevirapine Toxicity. The internal communiqués from DAIDS around the time of Hafford's death made it clear that Doctors Knew She Had Died of Nevirapine Toxicity.

But She Never Had AIDS or Anything

But, Joyce Ann Hafford, Never Had AIDS, or Anything, Even on the Diagnostic Scale of AIDS.' - 'Out of Control: AIDS and the Corruption of Medical Science", Harper's Magazine, March 2006.

HIV Tests Cannot Diagnose HIV Infections

"The alleged existence of HIV was asserted from the study of proteins, Reverse Transcriptase activity (RT), and RNA fragments that were found in culture supernatants, **not from the direct analysis of purified viral particles.**

Surprisingly, **the existence of HIV was then claimed indirectly**, on the basis of the presence in complex cell cultures and/or "HIV-positive" individuals of:

1. Proteins/glycoproteins such as gp160/150, gp120, gp41/45/40, p34/32, p24, and p18/17, **each claimed to belong to HIV;**
2. Enzymes such as reverse transcriptase that supposedly belongs to HIV;
3. **RNA or DNA fragments that supposedly belong to HIV** (Papadopulos-Eleopulos et al 1993, 1996, 1997a, 1997b, 1997/8; Turner 1996, 1997/1998, 1998; Philpott 1997; Giraldo et al 1999; de Harven 1997/8, 1998, 2002a,b).

However, none of these substances have been proven to belong to HIV.

How could it be proven that the molecules found in those cultures actually belong to viral particles that have never been properly purified?

How could it possibly be demonstrated that these substances are not simply cellular microvesicles or cell debris contained in the cultures, and **that happen to sediment at the same density as "retroviruses"?**

In order to prove that those molecules, allegedly regarded as "markers", are part of a retrovirus named HIV, it would have been absolutely necessary to purify the retroviral particles, separating the particles from everything else.

This has never been done with HIV (Papadopulos-Eleopulos et al 1996; de Harven 1998; Giraldo et al 1999). "The specificity of viral markers depends on the success of "virus" isolation and purification.

Without fully demonstrated success in "virus" isolation and purification, identification of viral markers is extremely hazardous and can lead to severe misinterpretation of clinical data.

A dramatic illustration of this is to be found in current HIV research.

In this case, **the "virus" (HIV) has never been properly isolated, since sedimentation in sucrose gradient at the density of 1.16 g/mL was erroneously considered to yield pure virus, systematically ignoring that material sedimenting at that density contains large amounts of cell debris and cellular microvesicles** (Gluschankof et al 1997; Bess et al 1997).

HIV has never been either isolated or purified as intact viral particles.

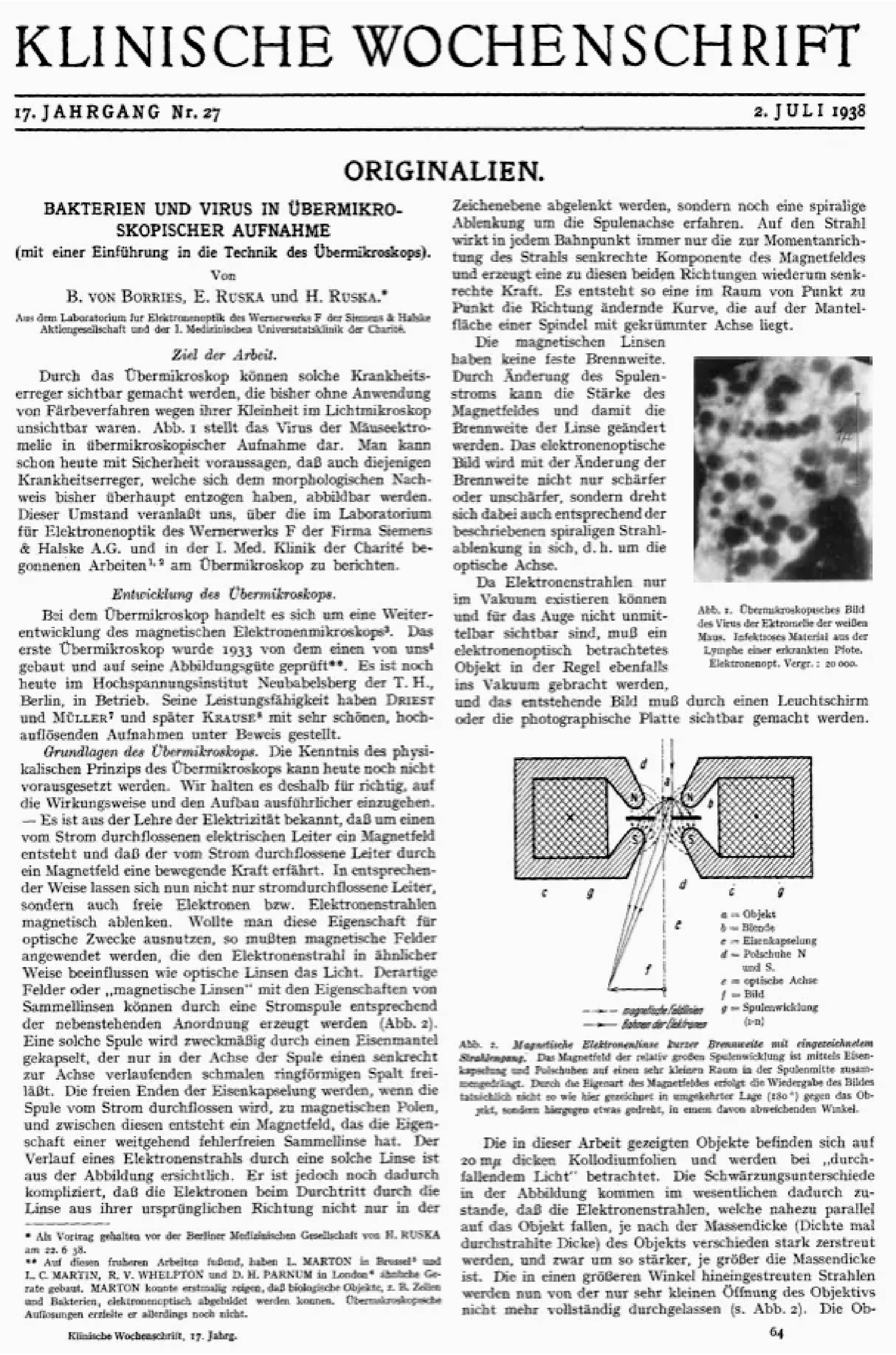
Therefore, there is no scientific data validating the contention that what is currently referred to as HIV is in fact a "virus"! There does not exist a single test tube in any laboratory anywhere containing purified particles of HIV.

Researchers working with what they believe to be HIV in laboratories all around the world are most likely not working with HIV particles at all.

AIDS, rather than being an infectious/viral disease, appears to be a toxic and nutritional syndrome (Giraldo 1997a-e; 2002)." - Professor Dr Roberto Giraldo, MD; Professor Dr Etienne de Harven, MD, in "HIV Tests Cannot Diagnose HIV Infections", Response to Dr Robert Gallo's criticisms of Celia Farber's Harper article, Immunity Resource Foundation, 2006.

The "Virus" Photograph Claim Farce

> ***"Agents which are essentially Non-Living. In 1938, the first electron microscope pictures of viruses were published and since then nearly all the important viruses have been photographed by this instrument."*** *- in "Natural History of Infectious Diseases", Cambridge University Press, 1970.*



KLINISCHE WOCHENSCHRIFT

17. JAHRGANG Nr. 27 2. JULI 1938

ORIGINALIEN.

BAKTERIEN UND VIRUS IN ÜBERMIKROSKOPISCHER AUFNAHME

(mit einer Einführung in die Technik des Übermikroskops).

Von

B. von Borries, E. Ruska und H. Ruska.*

Aus dem Laboratorium für Elektronenoptik des Wernerwerks F der Siemens & Halske Aktiengesellschaft und der I. Medizinischen Universitätsklinik der Charité.

Ziel der Arbeit.

Durch das Übermikroskop können solche Krankheitserreger sichtbar gemacht werden, die bisher ohne Anwendung von Färbeverfahren wegen ihrer Kleinheit im Lichtmikroskop unsichtbar waren. Abb. 1 stellt das Virus der Mäuseektromelie in übermikroskopischer Aufnahme dar. Man kann schon heute mit Sicherheit voraussagen, daß auch diejenigen Krankheitserreger, welche sich dem morphologischen Nachweis bisher überhaupt entzogen haben, abbildbar werden. Dieser Umstand veranlaßt uns, über die im Laboratorium für Elektronenoptik des Wernerwerks F der Firma Siemens & Halske A.G. und in der I. Med. Klinik der Charité begonnenen Arbeiten[1, 2] am Übermikroskop zu berichten.

Entwicklung des Übermikroskops.

Bei dem Übermikroskop handelt es sich um eine Weiterentwicklung des magnetischen Elektronenmikroskops[3]. Das erste Übermikroskop wurde 1933 von dem einen von uns[4] gebaut und auf seine Abbildungsgüte geprüft**. Es ist noch heute im Hochspannungsinstitut Neubabelsberg der T. H., Berlin, in Betrieb. Seine Leistungsfähigkeit haben Driest und Müller[7] und später Krause[8] mit sehr schönen, hochauflösenden Aufnahmen unter Beweis gestellt.

Grundlagen des Übermikroskops. Die Kenntnis des physikalischen Prinzips des Übermikroskops kann heute noch nicht vorausgesetzt werden. Wir halten es deshalb für richtig, auf die Wirkungsweise und den Aufbau ausführlicher einzugehen. — Es ist aus der Lehre der Elektrizität bekannt, daß um einen vom Strom durchflossenen elektrischen Leiter ein Magnetfeld entsteht und daß der vom Strom durchflossene Leiter durch ein Magnetfeld eine bewegende Kraft erfährt. In entsprechender Weise lassen sich nun nicht nur stromdurchflossene Leiter, sondern auch freie Elektronen bzw. Elektronenstrahlen magnetisch ablenken. Wollte man diese Eigenschaft für optische Zwecke ausnutzen, so mußten magnetische Felder angewendet werden, die den Elektronenstrahl in ähnlicher Weise beeinflussen wie optische Linsen das Licht. Derartige Felder oder „magnetische Linsen" mit den Eigenschaften von Sammellinsen können durch eine Stromspule entsprechend der nebenstehenden Anordnung erzeugt werden (Abb. 2). Eine solche Spule wird zweckmäßig durch einen Eisenmantel gekapselt, der nur in der Achse der Spule einen senkrecht zur Achse verlaufenden schmalen ringförmigen Spalt freiläßt. Die freien Enden der Eisenkapselung werden, wenn die Spule vom Strom durchflossen wird, zu magnetischen Polen, und zwischen diesen entsteht ein Magnetfeld, das die Eigenschaft einer weitgehend fehlerfreien Sammellinse hat. Der Verlauf eines Elektronenstrahls durch eine solche Linse ist aus der Abbildung ersichtlich. Er ist jedoch noch dadurch kompliziert, daß die Elektronen beim Durchtritt durch die Linse aus ihrer ursprünglichen Richtung nicht nur in der Zeichenebene abgelenkt werden, sondern noch eine spiralige Ablenkung um die Spulenachse erfahren. Auf den Strahl wirkt in jedem Bahnpunkt immer nur die zur Momentanrichtung des Strahls senkrechte Komponente des Magnetfeldes und erzeugt eine zu diesen beiden Richtungen wiederum senkrechte Kraft. Es entsteht so eine im Raum von Punkt zu Punkt die Richtung ändernde Kurve, die auf der Mantelfläche einer Spindel mit gekrümmter Achse liegt.

Die magnetischen Linsen haben keine feste Brennweite. Durch Änderung des Spulenstroms kann die Stärke des Magnetfeldes und damit die Brennweite der Linse geändert werden. Das elektronenoptische Bild wird mit der Änderung der Brennweite nicht nur schärfer oder unschärfer, sondern dreht sich dabei auch entsprechend der beschriebenen spiraligen Strahlablenkung in sich, d. h. um die optische Achse.

Da Elektronenstrahlen nur im Vakuum existieren können und für das Auge nicht unmittelbar sichtbar sind, muß ein elektronenoptisch betrachtetes Objekt in der Regel ebenfalls ins Vakuum gebracht werden, und das entstehende Bild muß durch einen Leuchtschirm oder die photographische Platte sichtbar gemacht werden.

Abb. 1. Übermikroskopisches Bild des Virus der Ektromelie der weißen Maus. Infektiöses Material aus der Lymphe einer erkrankten Pfote. Elektronenopt. Vergr.: 20 000.

a = Objekt
b = Blende
c = Eisenkapselung
d = Polschuhe N und S.
e = optische Achse
f = Bild
g = Spulenwicklung (1-n)

magnetische Feldlinien
Bahnen der Elektronen

Abb. 2. *Magnetische Elektronenlinse kurzer Brennweite mit eingezeichnetem Strahlengang.* Das Magnetfeld der relativ großen Spulenwicklung ist mittels Eisenkapselung und Polschuhen auf einen sehr kleinen Raum in der Spulenmitte zusammengedrängt. Durch die Eigenart des Magnetfeldes erfolgt die Wiedergabe des Bildes tatsächlich nicht so wie hier gezeichnet in umgekehrter Lage (180°) gegen das Objekt, sondern hiergegen etwas gedreht, in einem davon abweichenden Winkel.

Die in dieser Arbeit gezeigten Objekte befinden sich auf 20 mμ dicken Kollodiumfolien und werden bei „durchfallendem Licht" betrachtet. Die Schwärzungsunterschiede in der Abbildung kommen im wesentlichen dadurch zustande, daß die Elektronenstrahlen, welche nahezu parallel auf das Objekt fallen, je nach der Massendicke (Dichte mal durchstrahlte Dicke) des Objekts verschieden stark zerstreut werden, und zwar um so stärker, je größer die Massendicke ist. Die in einen größeren Winkel hineingestreuten Strahlen werden nun von der nur sehr kleinen Öffnung des Objektivs nicht mehr vollständig durchgelassen (s. Abb. 2). Die Ob-

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* Als Vortrag gehalten vor der Berliner Medizinischen Gesellschaft von H. Ruska am 22. 6. 38.

** Auf diesen früheren Arbeiten fußend, haben L. Marton in Brüssel[5] und L. C. Martin, R. V. Whelpton und D. H. Parnum in London[6] ähnliche Geräte gebaut. Marton konnte erstmalig zeigen, daß biologische Objekte, z. B. Zellen und Bakterien, elektronenoptisch abgebildet werden können. Übermikroskopische Auflösungen erzielte er allerdings noch nicht.

Klinische Wochenschrift, 17. Jahrg. 64

The 1938 article, Ruska and von Borries shared their electron micrographs of "viruses"

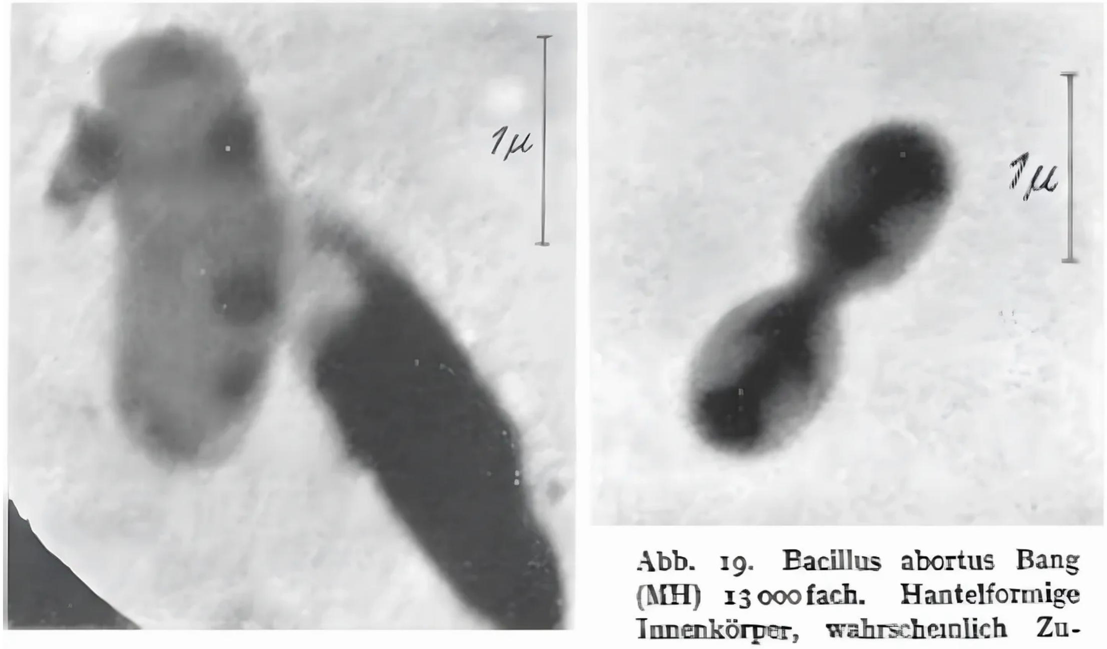


Abb. 4. Bacterium coli, 17 100 fach.

Abb. 19. Bacillus abortus Bang (MH) 13 000 fach. Hantelformige Innenkörper, wahrscheinlich Zustand kurz nach einer Teilung.

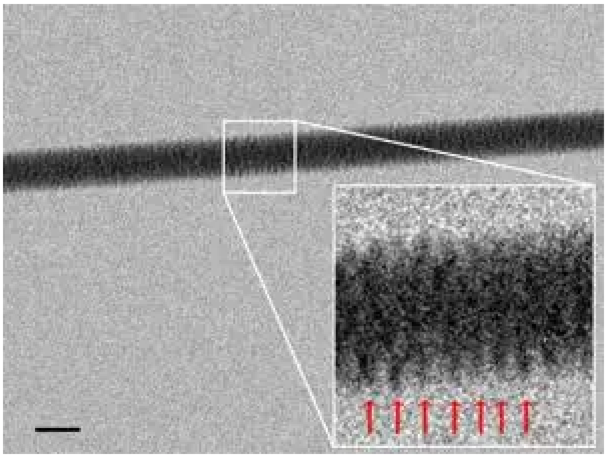
The Electron micrographs of the "mouse ectromelia virus"
taken in 1938 by Ernst Ruska, Helmut Ruska, and Bodo von Borries.

How can anyone identify this dots has a "virus" and even more absurd is the fact that they claim to be able to identify between different "viruses."

The Electron Microscopy A Family Business: "Helmut Ruska worked with his brother Ernst Ruska, and brother-in-law Bodo von Borries, at Siemens-Reiniger-Werke. Ernst Ruska was the inventor of the Electron Microscope. He was the first scientist to study "sub-microscopic" structures of parasites, bacteriophages and "various viruses" with an Electron Microscope. In the 1940s, he published numerous articles regarding his research, including Die Bedeutung der Übermikroskopie für die Virusforschung (The Significance of Electron Microscopy for Virus Research). Ernst August Friedrich Ruska won the Nobel Prize in Physics in 1986 for his work in electron optics, including the design of the first Electron Microscope. Build the first Electron Microscope in 1933, at Siemens-Reiniger-Werke AG. At Siemens, he was involved in developing the first commercially produced electron microscope in 1939. Bodo von Borries worked with Ernst Ruska in the 1930s to build the first practical electron microscopes. In 1937, he commenced work on Electron Microscopy with Ernst Ruska at Siemens & Halske AG in Berlin. Also in 1937, Von Borries marrid Hedwig Ruska, Ernst Ruska's sister." *- in Wikipedia, 27 June 2026.*

> ***"Many people have assisted us in the preparation of this book, in allowing us to visit abattoirs, dairies, sewage farms, water works, museums etc., and by allowing us to use their illustrations. Each illustration in the text carries its own acknowledgement but we would especially like to record our appreciation of the generosity of the World Health Organization (WHO) and the Wellcome Museum of Medical Science (Pharmaceutical Industry), London. The development of the Electron Microscope not only confirmed the particulate nature of viruses and the range of size in this group of micro-organisms, but it also provided some detailed information of the shape and contents of the virus particle. The first electron microscope pictures of viruses were published in 1938; these confirmed the differing sizes of viruses and their differing outline images."*** *- in "Man Against Disease", 1973.*

If "viruses" are particles of DNR and RNA, how come DNA and RNA can be seen under the Electron Microscope. The images shown Are just Ridiculous.



(Image: Enzo di Fabrizio)

"It may be why life is screwed up. Interpreting the images requires complex mathematics to figure out what crystal structure could give rise to the observed patterns." - in "DNA imaged with electron microscope for the first time", New Scientist", 28 November 2012.

And this images are even more absurd, how can anyone identify or be able to differentiate anything this small, it begs not only believe, but also the use of Mental Gymnastics.

So, then, the Question then arises How On Earth was the "Virus" first photographed in 1938.

The how come the images of the "viruses" from 1939 are all cellular in shape and form, if "viruses" are not cellular?

Something Rotten at The Core of Science

"It is not surprising that the Public Is Increasingly Skeptical About The Agenda And The Conclusions of Science. Largely because of this antagonism to openness and evaluation, **there is a great lack of good evidence either way concerning the objectivity and validity of peer review.** What evidence there is does not give confidence but is open to many criticisms. Now, Peter Rothwell and Christopher Martyn have thrown a bombshell [**"Agreement between reviewers in clinical neuroscience was little greater than would be expected by chance alone."** - in "Reproducibility of peer review in clinical neuroscience", Brain, September 2000]. **Their conclusions are measured and cautious, but there is little doubt that they have provided Solid Evidence of Something Truly Rotten at the Core of Science."** - in "Trends in Pharmacological Sciences", February 2001.

Medical-Industrial Complex

"In his farewell address as President, 17 January 1961, Eisenhower warned of "The Military-Industrial Complex", had acquired great political and economic power. The past decade has seen the rise of another kind of "Industrial Complex", with an equally great potential for influence on public policy; this time in Health Care. The most important health-care development of the day is the recent, relatively unheralded Rise of a Huge New Industry.

Hospitals, Nursing Homes, Diagnostic Laboratories, Home-Care, Emergency-Room Services, Haemodialysis, and a wide variety of other services produced a gross income to this industry last year of about $35 Billion to $40 Billion in 1980.

This New "Medical-Industrial Complex" creates the problems of overuse and fragmentation of services, overemphasis on technology, and "cream-skimming", and it may also Exercise Undue Influence on National Health Policy.

In this medical market, physicians must act as discerning purchasing agents for their patients and therefore should have no conflicting financial interests.

Closer attention from the public and the profession, and careful study, are necessary to ensure that the "Medical-Industrial Complex" puts the interests of the public before those of its Stockholders." - in "The New Medical-Industrial Complex", New England Journal of Medicine, 23 October 1980.

Medical-Industrial Complex
US$ 1.6 Trillion Income by 2025

"Projected Global Medicine Spending is set to grow by 3% - 6% Compound Annual Growth Rate to $US 1.6 Trillion by 2025, lifted by growing Pharmerging Markets and with some lingering effects of the "Covid-19 Pandemic".

The projected US$ 1.6 Trillion excludes spending on "Covid-19" Vaccines, which is expected to result in cumulative spending of $157 Billion by 2025; driven primarily by the initial wave of spending on Vaccinations to be

completed by 2022. Later spending will include Booster Shots, and ongoing Covid-Related Treatments. The Growth in Medicine Use, and Spending in Pharmerging markets is expected to accelerate through 2025, resulting in an increase of around $140 Billion in global spending, but this will be offset in developed markets by losses of exclusivities. Oncology ("Diagnosis", "Tests" and "Treatment" of Cancer), and Immunology ("Laboratory Work" focusing on "Research", either in Academia or the Pharmaceutical Industry; Clinical Immunologists, focus on the "Diagnosis" and "Management" of diseases) will remain the leading global therapy areas, growing by an expected 9% - 12% Compound Annual Growth Rate, Boosted by: New And Novel Treatments And Usage of Medicines. By 2025, "Speciality Treatments" will account for 50% of Total Spending Globally, and as much as 60% in Developed Markets." - in "Global Medicine spending set to reach $US1.6 Trillion by 2025", Pharmaco. Econ. Outcomes News, 15 May 2021.

Sickness Has Become Lucrative

"Customers don't buy nails based on weight. They buy nails that actually work. Unfortunately, input-based incentive structures are everywhere in our society. Pharmaceutical Companies Make Money When They Medicate Sick People. So, Sickness Has Become Lucrative.

A Patient Cured Is A Customer Lost

This is not to say that the entire healthcare industry is evil, but the incentives are perverted. Anytime you have profit attached to a problem, a great deal of energy and intelligence will be directed towards keeping the problem going and growing. This is what we call an Industrial Complex. Drug Companies Profit Off Chronic Illness and Prescriptions." - in "The Cobra Effect: How Good Intentions Lead to Bad Outcomes, After Skool, 23 September 2025.

The Medical Industrial Complex Is Bigger Than The Military Industrial Complex

> ***"Jobs in American Health Care is soaring at a rate 3 times faster than the growth of the population, troubling experts concerned about the sharp rise in the nation's Medical Costs; 37 of every 1,000 Americans worked in Health Care last year. Wages in the Industry are also rising; much faster than in the rest of the economy. The last 5 years, the pay of Doctors increased 30%. 'The Medical-Industrial Complex Is Larger than the Military-Industrial Complex.'*** *- Dr Philip R. Lee, MD, Director of the Institute for Health Policy Studies, University of California at San Francisco." - in "Job Growth in Health Care Soars", New York Times, 5 March 1990.*

Military/Medical Industrial Complex

> ***"In the Councils of Government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the Military-Industrial Complex. The potential for the disastrous rise of misplaced power exists, and will persist. Until the latest of our world conflicts, the United States had no armaments industry. American makers of ploughshares could, with time and as required, make swords as well. But we can no longer risk emergency improvisation of national defense; we have been compelled to create a permanent armaments industry of vast proportions."*** *- President Dwight Eisenhower, in "Farewell Address", White House, 17 January 1961.*

Henry Kaiser

Famous for Using Massive Public Funding and Political Connections During the Great Depression and World War II

Henry Kaiser (1882–1967) was an American industrialist involved in fostering the Modern American Medical Trade.

Henry Kaiser was an early advocate of bringing American aid to those suffering from German aggression in Europe.

In 1940, 1 Year Before the US had entered World War II, Kaiser served as National Chairman of United Clothing Collection for International War Relief to provide much-needed clothing for the refugees from Hitler's conquests in Europe. Henry John Kaiser was an ardent supporter of Franklin D. Roosevelt's New Deal, operating as a "Government Entrepreneur" Who Utilized Public Infrastructure and Defense Contracts to Build His Industrial Empire. He pioneer the Prepaid Healthcare Concept through Kaiser Permanente System. Kaiser Permanente operates as a consortium comprising 3 distinct but interdependent entities: Kaiser Foundation Health Plan; Kaiser Foundation Hospitals; Regional Permanente Medical Groups, is the largest managed care organization in the United States. Each Permanente Medical Group functions as a separate for-profit partnership or professional corporation. These groups do not publicly disclose their financial results, they are primarily funded by reimbursements from the Kaiser Foundation Health Plan, one of the largest Not-For-Profit Organizations in the United States.

He suported Roosevelt New Deal program. Kaiser became a major beneficiary of such Government-Funded Projects.

"More than any other individual person, industrialist Henry J. Kaiser was responsible for the Wartime Industrial Boom in the West." - Gerald D. Nash, History Professor University of New Mexico, in "The American West in the 20th Century", 1973.

Edgar Kaiser Sr. (1908–1981) American industrialist, Chairman of Kaiser Aluminum and Chemical Corporation; Kaiser Cement Corporation; Kaiser Steel Corporation. In 1941 Kaiser was appointed vice-president and general manager of Kaiser Shipyards, responsible for building ships from prefabricated parts during the Second World War as part of the Emergency Shipbuilding program.

The Essence of The Healthcare Model

The Health Maintenance Organization and Resources Development Act of 1973

President Richard Nixon, adviser; John Ehrlichman, put it so clearly when describing **The Essence of this Healthcare Model** in 17 February 1971:

> ***"All the incentives are toward Less medical Care, because The Less Care They Give Them, The More Money They Make."*** *- John D. Ehrlichman, in Oval Office, White House, conversation with U.S. President Richard Nixon, 17 February 1971, that led to* ***the Health Maintenance Organization Act of 1973.***

Nixon succinctly endorsed the idea in this conversation, and his administration soon made it the core of what would eventually become the Health Maintenance Organization (HMOs) and Resources Development Act of 1973.

The Less Care Given:
The More Money Is Made

In 1971, Edgar Kaiser, Sr, son of the founder of Kaiser Permanente System, one of the First Big Health Maintenance Organizations (HMOs), went to see John Ehrlichman, a White House Domestic Affairs Advisor to President Nixon, to Lobby the Nixon White House to Pass Legislation that would Expand the Market for Health Maintenance Organizations (HMOs). Ehrlichman reported this conversation to Nixon on 17 February 1971:

"John D. Ehrlichman - **"On the Health Business,** we have now narrowed down the vice president's problems on this thing to one issue and that is whether we should include these **Health Maintenance Organizations like Edgar Kaiser's Permanente.** The vice president just cannot see it. We tried 15 ways to explain it to him and then help him to understand it. He finally says, 'Well, I don't think they'll work, but if the President thinks it's a good idea, I'll support him a 100%.'"

President Nixon - "Well, what's the judgment?"

Ehrlichman - "Well, everybody else's judgment very strongly is that we go with it. He's the one holdout that we have in the whole office."

President Nixon - "You know **I'm Not Too Keen on Any of These Damn Medical Programs."**

Ehrlichman - "This Is a Private Enterprise One."

President Nixon - "Well, that appeals to me."

Ehrlichman - **"Edgar Kaiser is running his Permanente Deal For Profit.** And the reason that he can do it. I had Edgar Kaiser come in talk to me about this and I went into it in some depth. **All the Incentives are toward Less Medical Care, Because The Less Care They Give them, The More Money They Make."**

President Nixon - "Fine."

Ehrlichman - **"And the incentives run the right way."**

President Nixon - "Not bad"." - in Oval Office, White House, Conversation between John D. Ehrlichman, White House Domestic Affairs Advisor , and U.S. President Richard Nixon, 17 February 1971, that led to the Health Maintenance Organization Act of 1973.

"On his 85th birthday, Henry J. Kaiser:

> ***"Of all the things I've done, I expect only to be remembered for my Hospitals.*** *They're the things that are filling the people's greatest need - good health."*

Grandson Henry Mead Kaiser, who is a director of the family Foundation and the Health Plan, believes **that Prophesy Has Been Fulfilled.**

Today, Kaiser Permanente is the largest Health Maintenance Organization (HMOs) in the United States, with revenue of $3.5 Billion in 1984.

Henry Mead's older brother, Edgar F. Kaiser Jr., is chairman of the Henry J. Kaiser Family Foundation, a tax-free charitable organization.

> *"It was the most important thing to my grandfather. The health-care plan came underneath the foundation if you go back historically, and now it's an institution - a big one." - Edgar Jr.*

In a comparison Henry J. probably would have enjoyed, Edgar Jr. likened his grandfather to Henry Ford, J. P. Morgan or John D. Rockefeller, and their Foundations to the Kaiser Trust.

> *"What you hope is In All Those Foundations you've provided the funding for and the environment for the creative spirit of those truly great men to continue. And that is less than perfect, but it's the best you can do."*

By 1944, Kaiser was on Franklin D. Roosevelt's list of possible replacements for Vice President Henry Wallace. Long after Harry S. Truman had been selected, Kaiser told some of his associates that he had been offered the job but had turned it down." - "An Empire Fades Away, but Its Legacy Lingers On", Los Angeles Times, 4 August 1985.

The Pharmaceutical Industry Is The Primary Driver of Iatrogenic Morass

Iatrogenic Morass, The Actual Harm Induced By Medical Care; Is Furthermore Driven by Pharmaceutical Interventions.

> ***"5% of the 8.5 Million patients admitted to Hospitals in England and Wales each year Experience preventable Adverse Events, leading to an additional 3 Million bed days. More than 1 Million Hospital Admittances Each Year in the UK Are Because of Medical Errors, incompetence or the Side-Effects of Treatment. Much of the damage is caused by careless or inappropriate Prescribing or Overprescribing. This means the Clincians [are] rate[d] Alongside Cancer, and Heart Disease as a Major Cause of Serious Illness and Death. A study by research team from University College London (2001) estimated that 1 in 14 British patients Suffers some kind of "Adverse Event" During Hospital Stays. 1 in 10 of all Hospital patients is Harmed by Complications, half caused by Clinical mistakes of some kind, and almost 70,000 a Year Die partly As A Result of such "Adverse Events"."*** *- in "Medicines-induced Iatrogenic Diseases", A submission to: Inquiry - Prevention in health and social care, UK Parliament , February 2023.*

"Since the 1950s the Death Rate from **Cancer Has Grown Significantly**, reaching 470,000 in 2008 and nearly 600,000 in 2009; decades after President Richard Nixon's declared "War on Cancer" and despite recurrent media-celebrated "discoveries" of proclaimed remedies. **Disorders "Physical and Mental" are now an ordinary feature of American life, cutting across age lines. The Medical Structure itself Cause at least 260,000 Deaths Yearly resulting from a variety of mistakes, Unnecessary Surgeries and other treatments, Hospital-Generated Diseases, and wrong or Excessive Drug Prescriptions.** Americans have also become by far the most over-medicated population in the world, with over 200 Million people Consuming Drugs for hundreds of medical and Psychological problems. **Drugs are Prescribed in the United States at a rate unheard of**, with domestic sales in 2009 more than $300 Billion Annually. The 10 Leading Pharmaceutical Companies amass greater profits than the remaining Fortune 500 corporations together. In the past 3 decades Congress Has Given Big Pharma virtual Carte Blanche to charge whatever the market will tolerate, justified by "free-enterprise" dogma since the Reagan years has permeated both the Health Care Industry, as the larger society. **Despite an avalanche of celebrated drug "therapies" along with high-tech interventions, sophisticated testing procedures, high-priced surgeries, and well-trained Biomedical Professionals, Most Health Indicators Worsens With Each Passing Year. The main improvements in the health status of Americans over the past century, Derive Less from enhanced Medical Treatment, than from advances in the Public**

Infrastructure and Hygiene. In "Overdosed America: The Broken Promise of American Medicine", 2004, a book about unnecessary healthcare, John Abramson, a medical practitioner in the Boston area for more than 20 years, argues that the U.S. Health Care Establishment has been Corrupted by its very modernity, by a hypermedicated system fixated on symptoms over causes, technical fixes over durable solutions, while preferring isolated treatments that largely ignore contextual factors such as: Lifestyle; Nutrition; Family Relations; Environment. He views **the System as Emphatically Iatrogenic (Counterproductive and in Many Ways Harmful) insofar as It Usually Does More Harm Than Good.**

Medical Trade Interventions Trigger Secondary Problems That Require Further Treatments

The Clearest Indicator of Iatrogenic Morass is the Drug Industry, which now dominates the entire Medical Terrain.

From his own experience, and reading of the medical literature, Abramson grew disillusioned with the scientific pretenses of American health care:

> *"What I found over 2 and a half years of researching the research is a scandal in medical science that is at least the equivalent of any of the recent corporate scandals that have shaken Americans confidence in the integrity of the corporate and financial worlds.* ***Rigging Medical Studies, Misrepresenting Research Results published in even the most influential Medical Journals, and withholding the findings of whole studies that don't come out in a sponsor's favor have all become the accepted norm in commercially sponsored medical research.*** *To keep the lid sealed on this Corruption of Medical Science; and to ensure its translation into Medical Practice; there is a complex web of corporate influence that includes disempowered Regulatory Agencies, commercially sponsored medical education, advertising, expensive public relations campaigns, and manipulation of free media coverage. And the Financial Ties Between many of the most Medical Experts and the Medical Industry. As a result the Pharmaceutical Industry is raking in unheard-of profit. While the Drug and Medical-Device Industries Are Enjoying their Enormous Profits, hardworking Americans are struggling to keep up with their health insurance premiums and medical bills, half of all Personal Bankruptcies in the United States are caused by medical expenses. The mechanisms that Americans trust to protect their health and resources have been dismantled by political pressure from Doctors and Medical Industry Lobbyists, while others have become absurdly dominated by people with financial ties to the Pharmaceutical Companies; a situation that no impartial observer would ever conclude was designed to represent anything other than corporate interests. This is now commonplace at the National Institutes of Health (NIH), and Food and Drug Administration (FDA). The bottom line is:* ***There has been a virtual takeover of medical knowledge in the United States, leaving doctors and patients little opportunity to know***

> ***the truth about good medical care, and no safe alternative but to pay up and go along."*** - *Dr John Abramson, MD, in "Overdosed America:* ***The Broken Promise of American Medicine",*** *2004.*

["As many as 66.5% of people who file for Bankruptcy blame Medical Bills as the Primary Cause. As many as 550,000 people file for Bankruptcy each year for this reason. This data has been known for many years and has continued. According to the Consumer Financial Protection Bureau, 100 Million Americans owe $220 Billion in Medical Debt." - in "Healthcare Insights", Scheinman Institute on Conflict Resolution, 21 October 2024]

The emergence of large-scale Corporate Medicine goes back to the well-known Rockefeller Agenda set in motion at the end of the 19th century. Expanded and rationalized across each succeeding decade, this system was always fueled and legitimated by science and technology, ultimately transformed into a managerial ideology embraced by a plethora of elite groups: **Doctors, Technicians, Hospitals, Insurance Companies, Drug Industry, Medical Schools, and Government Bureaucrats, All Motivated by Profits and Power; over all other concerns.**

Business and Government elites converged around a "union of corporations, philanthropy, the managerial-political stratum, **The Universities and Science spawned by the Rockefeller Medicine Men and their New system of Medicine."**

This broadening empire was socially and politically integrated on a foundation of immense financial, technological, and human resources. It soon evolved into an ideological and institutional force equivalent to a secular religion, entrenched network of practices, beliefs, and myths. The product of an ideological mentality unable to grasp the growing dysfunctions of a Medical System known globally as excessively costly, inefficient, bureaucratic, political insulated, and cut off from health care alternatives.

The Rise of the Pharmaceutical Industry

The United States is today the most voracious and obsessive drug-consuming nation ever, medically endorsed products found in nearly every home.

Pharmaceutical Consumption has sharply increased since the early 1980s, after the Bayh-Dole Act of 1984 gave the Drug Industry freer reign to maneuver, largely outside the realm of public scrutiny and accountability.

By 2003 Doctors were Prescribing 146 Medications for every 100 Office Visits.

Health Maintenance Organizations (HMOs)

As Drug Sales reached new heights, an average 1 year supply cost nearly $2,000. Doctors, Pharmacists, Therapists, Hospitals, Health Maintenance Organizations (HMOs), Insurance Companies, and Government Programs like Medicare felt the power of Big Pharma, legally empowered to advertise its goods everywhere: in

Newspapers and Magazines, TV, Medical Journals; promising the wonders of chemistry for achieving happiness, longevity, physical vigor, mental acuity, good relationships, and sexual vitality. **Big Pharma trades on popular fears of psychological insecurity, depression**, and inadequacy. Corporate Media grows ever-dependent on Pharmaceutical Advertising revenue that has reached several Billion Dollars Annually. As Big Pharma Superprofits continued to roll in, evidence showed that remedies sold by the drug giants more often than not Fail to Deliver what they Promise. Benefits are routinely exaggerated, and **Adverse Reactions Ignored or downplayed, not only within advertising but, more disturbingly, within the purportedly Scientific world of Biomedical Research.**

Abramson and Angell point out that **Prescriptions are typically written for Conditions stemming from Underlying Factors that Pills Can Rarely By Themselves Remedy.** Short-Term Medication for such needs as immediate pain relief or treatment of depression, the astounding fact is that **more than 90% of Drugs are Prescribed Long-Term, often in Potentially Harmful or Even Lethal Combinations.** Data showing adverse reactions (beyond limited "side effects") do not necessarily hurt sales because doctors and patients alike seem caught up in the mystique of what Big Pharma can deliver. **The overriding goal of Big Pharma is to Produce and Sell Srugs Bringing at least $1 Billion in Revenue Yearly.** Specific consumer populations are targeted: arthritis patients looking to get rid of pain; middle-aged men wanting greater sexual potency; children with Attention-Deficit Disorder (ADD) and other learning problems; seniors with high blood pressure; middle-aged women seeking hormonal rejuvenation, anyone battling anxiety, depression and allergies; in other words, a large percentage of the consuming public. "New" Drugs that supposedly innovative Research & Development brings to market turn out to be mostly recycled versions of older compounds referred to as "me-too" Drugs, and this includes the majority of blockbusters. What further boosts Big Pharma Fortunes is that Drugs Approved by the Food and Drug Administration (FDA) for specific conditions can then be prescribed by doctors for whatever condition they choose. **Millions use 2 or More Drugs Simultaneously for months, and years,** although the synergistic and **long-term effects of Drugs were never tested or monitored by the FDA.**

Technocratic Medicine

Such unregulated larceny is made possible by the collusion of the medical profession, insurance companies, and government programs like Medicare.

In this milieu the Pharmaceutical Industry is relatively free to employ every method available to bolster its unique corporate status. **With Wealth and Power Big Pharma casts its Influence over Congress, State Legislatures, the Medical Profession, Government Agencies, Political Campaigns and Academia, the Company is usually able to push through its Agendas.**

There is nothing in standard political science interest-group literature that captures this imposing reality, which has exploded since the early 1980s.

A Giant Corporate Apparatus beginning with The Rockefeller takeover, U.S. Medicine evolved into a Freewheeling Wall Street Operation.

> ***"The death rate is unchanged: In 1950, the death rate from all Cancers was 194 out of every 100,000 people. A half-century later, in 2001, it was 196 out of every 100,000 people. The overall death rate from all Cancers; Progress Has Been Non-Existent.*** *More than a half-century ago, Cancer was the second-leading cause of death in the United States. It remains so today. In 2001 (CDC data) the deaths of 553,800 persons were attributable to cancer. Heart Disease, long the No. 1 killer, claimed 700,100 lives. The third and fourth causes were Strokes at 163,500 and chronic low respiratory disease at 123,000.* ***Yet one of the deadliest killers is not even on the list. It attracts little or no attention from Congress. No celebrities rush to Capitol Hill to testify for more funding to wipe it out. No television entertainers proselytize for a cure or urge more testing. The Anonymous Killer? Mistakes: The kind that are another symptom of a failed system."*** *- Bartlett and Steele, in "Critical Condition:* ***How Health Care in America Became Big Business and Bad Medicine",*** *2004.*

Bartlett and Steele; devote many pages to this transformation, show how a mounting wave of: Mergers, Acquisitions, Hostile Takeovers, Consolidations, and Bankruptcies has Bolstered **an Empire Built on Technocratic Medicine, Deregulation, Stock-Market Maneuvers, and Superprofits. The Result has been Decline in the Quality of Health Care. The pretence that Big Pharma carries out innovative and medically vital research does not hold up to close scrutiny."** - "Phantom Democracy: Corporate Interests and Political Power in America", 2011.

Beware of Medical Trade and Those Near Them

Beware of The Medical Trade Frauds; The Political Parties Incompetence Careless and Corruption; The Pharmaceutical Industry Total Disregard for Human Life and Suffering; The Financial Sector Without Ethics and Infinite Greed (of those pertaining to Dollars and Cents). Beware of These Groups, with their own intents and purposes. Be Not Controlled by Their Influences, as to be Misguided and Misled. For Emunctology is indeed, that which is Shows the Direction, Instructing in Tenet, in Example and in Counsel, to those that have been, or are in the ways of being misled, misguided by these groups, parties and sectors.

He Standeth Take Heed Lest He Fall

Let him that Thinketh, he standeth take heed lest he fall; for in Him Is Light, and the Light is the Light of the World. Naught may destroy that as is Founded in Him. For in Him is Light, and the light is the light of the world. Be then, thou, the torch or light bearer for those that sit in darkness.

They Had You Lost

They Had You Lost! But in Him is the Light, and the Light is the Light of the World. Seek the Lord when He may be found, for in Him is Life, and the Life is the Light of the World. Seek the ways that are His, and all else shall be added unto thee.

High Cholesterol: Another Medical Trade Farce

> *"Pfizer's LDL cholesterol-lowering atorvastatin (Lipitor) defines what it means to be a blockbuster drug. Patented in 1997, it has raked in around US$130 Billion for Pfizer during its 14 years on the market, making it the world's bestselling drug of all time." - in "Lessons from Lipitor and the broken blockbuster drug model", The Lancet, 10 December 2011.*

Cholesterol: A Substance The Body Absolutely Needs to Function

Cholesterol is a waxy, fat-like substance that the body Absolutely Needs to Function.

It Is Essential for:

1. Building Cell Membranes.

2. Producing by Synthesising Steroid Hormones.

Cholesterol is the primary biological precursor for steroid hormones, which are synthesized in specialized tissues like the adrenal glands, gonads (testes and ovaries), and placenta. Regulated by transport proteins, cholesterol converts into pregnenolone before branching into 5 main hormone classes:

I. Progestins (e.g., Progesterone): Primarily regulates the menstrual cycle and maintains pregnancy.

II. Glucocorticoids (e.g., Cortisol): Controls the body's response to stress, regulates metabolism (gluconeogenesis), and suppresses inflammation.

III. Mineralocorticoids (e.g., Aldosterone): Regulates blood pressure and ion balances (sodium and potassium) in the kidneys.

IV. Androgens (e.g., Testosterone): Promotes male secondary sex characteristics, libido, and spermatogenesis.

V. Estrogens (e.g., Estradiol): Promotes female sex characteristics and regulates the reproductive system.

These vital derivative hormones regulate a vast array of physiological functions in the body.

3. Creating Bile Acids. Cholesterol is the essential raw building block for bile acids, which the liver uses to digest dietary fat and excrete excess cholesterol from the body. This critical conversion process consumes roughly 500 mg of cholesterol daily, making it the body's primary mechanism for eliminating excess cholesterol.

4. Synthesising Vitamin D. Cholesterol serves as the crucial biochemical precursor to vitamin D. When ultraviolet B (UVB) rays from sunlight strike the skin, they interact with a cholesterol derivative called 7-dehydrocholesterol. This initiates the conversion into previtamin D3, which then undergoes further activation in the liver and kidneys to become active vitamin D.

5. Aiding Digestion. Cholesterol is essential for digestion because the liver uses it to produce bile acids. These acids break down dietary fats in the small intestine, forming water-soluble droplets that allow your body to absorb crucial nutrients and fat-soluble vitamins (A, D, E, and K)

Without Cholesterol the Body Cannot Survive

Without Cholesterol, the body simply could not survive. Extremely low levels of Cholesterol are statistically linked to higher mortality rates. Extremely low levels of vital metrics, such as serum total cholesterol (<4.14 mmol/L), socioeconomic status, or certain physical activities, are statistically linked to higher mortality rates. Cholesterol Pharmaceutic Medications, in particular Statins, they cause Side Effects such as: Muscle Aches, Digestive Issues, Headaches, and Increased Diabetes Risk. Also Severe Side Effects such as Liver Damage, or muscle breakdown (Rhabdomyolysis).

Printing Money for Drug Companies

“The only justification I can see for the new Cholesterol practice management guidelines is to Print Money for Drug Companies. Truly, how can anyone think we need to prescribe statins to 50% of the population older than 40? In order to justify this extreme position, data had to be distorted and cholesterol vilified. Cholesterol (a molecule critical to health), has been demonized in conventional medicine and the popular press as the major cause of heart disease. The 2013 American College of Cardiology/American Heart Association “Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults” significantly lowers the “safe” cholesterol blood levels. These new “standards” mean that many adults in the United States can be prescribed statins despite the dearth of documentation that they provide any benefit except for a small subset with very specific risk factors. As bad as, or even worse than, the costs will be all the adverse events and the real problem: the underlying causes are once again ignored in favour of treating the symptom; an elevated blood measure.

Cholesterol is Critical for Health

Cholesterol is essential for life. In fact, the body produces more of it each day (about 1 g) than most consume in their daily diet (typically 200–300 mg). It is used to make cell walls, insulate nerves, carry fats in the blood, make steroidal hormones, make vitamin D, make bile salts, repair injured tissues — the list is long. Interestingly, human breast milk contains a lot of cholesterol, typically making up 33% of the lipids. An infant consuming 600 mL of mother's milk in a day is taking in 50–100 mg of cholesterol. There is some very intriguing research showing that older people with higher levels of cholesterol have a lowered risk of death, depression, dementia, violent behavior, etc. (Some studies show that older adults, typically over 60, with higher cholesterol, have lower all-cause mortality, less dementia, and fewer psychiatric issues). Nonetheless, when cholesterol becomes oxidized, it becomes toxic in the body, particularly to the lining of the blood vessels.

Oxidized Cholesterol

Although very high levels of cholesterol are probably not good for health (typically indicative of insulin resistance), the primary problem is not the cholesterol itself, but rather when it is oxidized. More than half (52%) of the people suffering a heart attack have "normal" cholesterol levels (at least "normal" before the standards were changed). This oxidation has more to do with inflammation than with cholesterol." - in "The Vilification of Cholesterol (for Profit?)", Integrative Medicine, A Clinician's Journal, June 2014.

> *"Hardening of the arteries (Atherosclerosis) is not caused by Dietary Cholesterol but by Oxygen Deprivation." - Dr William C. Douglass, MD, in "Into the Light: Tomorrow's Medicine Today", 1997.*

"Hepatobiliary unit. This unit also regulates Cholesterol levels. Cholesterol ensures a sufficient base material for the production of the hormones of immediate adaptation through the corticotropic adrenal cortex. It is the base material for peripheral gonadotropic hormones of short-term adaptation. It is also the base material for Vitamin D, which plays a role in immunity and regulation of the thyrotropic axis. The hepato-biliary unit is permanently submitted to control and regulation by the systems of adaptability of the organism during all durations of adaptation demand, be they of internal and external origin." - in "The Theory of Endobiogeny", Vol.1, 2019.

> *"Disruption of Cholesterol Metabolism in the Brain Is Correlated with Neurodevelopmental Disorders or Neurodegenerative Diseases. The brain, which contains approximately 25% of the body's total Cholesterol, Primarily Stores Cholesterol in the myelin sheath, astrocytes, and neuronal cell membranes. Brain Cholesterol is believed to be crucial for maintaining cell morphology, neuronal transmission, and synaptic formation." - in "Lipid Metabolism in Homeostasis and Disease", Signal Transduction and Targeted Therapy, 16 February 2026.*

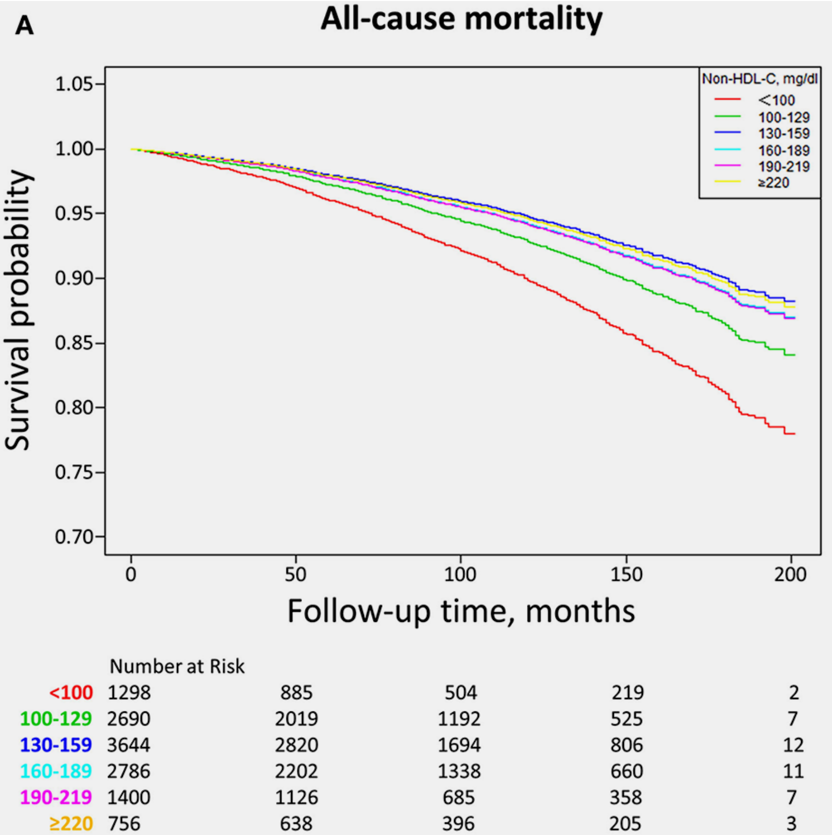
The Medical Trade High Cholesterol Hypothesis Farce

"High low-density lipoprotein cholesterol (LDL-C) is inversely associated with mortality in most people over 60 years. This finding is inconsistent with the cholesterol hypothesis (ie, that cholesterol, particularly LDL-C, is inherently atherogenic). Since elderly people with high LDL-C live as long or longer than those with low LDL-C, our analysis provides reason to question the validity of the cholesterol hypothesis. Moreover, our study provides the rationale for a re-evaluation of guidelines recommending pharmacological reduction of LDL-C in the elderly as a component of cardiovascular disease prevention strategies. Cardiovascular mortality was highest in the lowest LDL-C quartile and with statistical significance." - in "Lack of an association or an inverse association between low-density-lipoprotein cholesterol and mortality in the elderly: a systematic review", BMJ Open, 2016.

> *"The results indicate higher mortality among older people with lower levels of total cholesterol. Furthermore, they show no association between all-cause mortality and hypercholesterolemia, high LDL-c, low HDL-c, hypertriglyceridemia, and high non-HDL-c in this group of older adults. Our results did not show a positive association between hyperlipidemias and all-cause mortality. In the initial analysis, even before excluding premature mortality and underweight individuals, this association was negative." - in "Lipids and all-cause mortality among older adults: a 12-year follow-up study", The Scientific World Journal, 1 May 2012.*

Cholesterol Medication 47% Report Adverse Effects

"**Statin Market Size and Growth:** Valued at USD $17.47 Billion in 2026, projected to **USD $28.6 Billion by 2035** at a CAGR of 5.63%. Major Market Restraint: **47% of Patients Report Adverse Effects, including Muscle Pain and Liver Enzyme Elevation. Covid-19 Impact: Demand for statins has increased during Covid-19 has Boosted the Market Growth."** - in "Statin Market Size, Trends | Forecast Report [2026-2035]", Business Research Insights, July 2026.



Number at Risk

	0	50	100	150	200
<100	1298	885	504	219	2
100-129	2690	2019	1192	525	7
130-159	3644	2820	1694	806	12
160-189	2786	2202	1338	660	11
190-219	1400	1126	685	358	7
≥220	756	638	396	205	3

- in “U-Shaped Relationship of Non-HDL Cholesterol With All-Cause and Cardiovascular Mortality in Men Without Statin Therapy”, Front. Cardiovasc. Med., 7 July 2022

“Older adults with LDL cholesterol levels above 130 mg/dL live longer than older adults with LDL cholesterol levels below 130 mg/dL. Older adults with mildly high cholesterol levels have a greater chance of survival than older adults with lower cholesterol levels. Cholesterol has become demonized due to its association with heart disease, making statins; cholesterol-lowering pharmaceuticals; the hero. However, some studies, particularly of older adults, have shown that cholesterol may not be the enemy. Researchers (“The Cholesterol Paradox in Long-Livers from a Sardinia Longevity Hot Spot (Blue Zone)”, Nutrients 2025) discovered that people with higher cholesterol levels live longer than people with lower cholesterol levels.” - in “New Study Shows People with Higher Cholesterol Live Longer than People with Lower Cholesterol”, NAD+ Aging Science, 20 March 2025.

Taking Blood Pressure Medication Makes No Differences in Mortality, Cardiovascular Events, Coronary Artery Disease or Stroke

“When you prescribe a Medication to a patient, your expectation is that the Drug will work. The Reality, however, is that Most Patients Won’t Benefit From Most Prescribed Drugs. It’s somewhat disconcerting how many people need to be treated in order for one case of benefit, a measure referred to as Number Needed to Treat (NNT). Even so, Number Needed to Treat is an imperfect measure and often miscalculated.

For instance; If a Drug has an Number Needed to Treat of 10, it would take 10 people treated with the Drug to observe 1 Case of Benefit or Avoidance of 1 Bad Outcome.

Do Blood Pressure Medicines Prevent Cardiovascular Events in these patients?

The Answer IS NO.

After up to 5 Years of follow up, people with mild hypertension Taking Blood Pressure Medicine Experienced No Differences In Mortality, Cardiovascular Events, Coronary Artery Disease, or Stroke, according to the authors of a review on TheNNT.com.

That is, there is no Number Needed to Treat - or, rather, the Number Needed To Treat Is Infinite. Not incidentally, 1 in 12 patients Experienced Side Effects From The Medication.” - in “5 Approved Drugs That Don’t Measure Up”, MDLinx, 17 January 2020.

US Produces 43.7% Global Pharmaceuticals

The United States Pharmaceutical Industrial Complex, Produced 43.7% of the Global Pharmaceuticals in 2023. But the USA has only 4.2% of the Worlds Population; October 2025.

“I was in the Intensive Care Unit, when a Cardiologist came by. **He advocates a wider use of cholesterol-lowering Statin Medications than I do**, and started to cite the literature about why **I Should be Taking More Cholesterol-lowering Medicine than I already was.** I asked him; if he had read the studies underlying that literature, and of course he had. **In other words, he was aware that His Recommendation that I Increase My Use of Statin Drugs Was Based entirely on incompletely vetted Commercially-Sponsored, and largely Commercially-Influenced Medical Journal Articles. We have a Medical-Industrial Complex that Is Sucking America’s Wealth away from the other things that will make us healthier.**

The "Bayh-Dole Act", aimed to remedy that, by allowing Universities and other Nonprofit Research Institutions to Commercialize discoveries made by their scientists while conducting federally-funded research by retaining any profits - including Profits from Patents on Pharmaceuticals. With that, Universities Became Players in the Marketplace, and Were Absorbed into the Medical-Industrial Complex. We can't allow America to be held hostage by the Medical-Industrial Complex." - Dr John Abramson, MD, in "America's Broken Health Care: Diagnosis and Prescription", Imprimis, February 2023.

The Medical Trade Uses Money And Power To Thwart All Other Treatment Approaches That Threaten Its Economic Business Model; That Generates Profits From Disease

"The over-specialization of Medicine has contributed to the fragmentation of care, as has the mechanization of modern medicine.

Highly sophisticated Medical technology, Biomedicine has lost sight of the person. Patients are truly lost in a Medical Maze of Bureaucratic Paperwork, Mechanistic Medical Testing, and ever-changing, harried doctors; a maze in which **patients too often have become symptoms and diseases, no longer living human beings.**

The Life Energy Is The Healing Force that Is The Foundation of All Medical Disciplines.

Hippocrates said:

"The Natural Force Within Each of Us Is The Greatest Healer of Disease."

Drug Makers have evolved from the small businesses that promoted patent medicines; to the **Global Pharmaceutical Corporations that push powerful prescription, and non-prescription Drugs. The Drug Industry uses its wealth and power to: Thwart All Other Treatment Approaches that Threaten Its Economic Base.** This is logical in terms of capitalism. **It is illogical and self-destructive in terms of human progress and health.** In addition, the manufacturers of medical devices have developed ingenious machines that have transformed the practice of medicine. **The physicians who have been trained in mechanistic, drug-oriented medicine have been transformed themselves in ways that have caused them to lose touch — literally —with their patients and their patients needs. Because physicians rarely touch patients, they rarely touch their patients lives. At times, the power of the Pharmaceutical and Medical Industries - supported mainstream physicians and physician organizations, as well as by the politicians who also serve their interests** - can seem as awesome as a tidal wave.

Through their Economic Clout, these Industries control the mass media images that shape public opinion as to who is a "real" doctor, and what is "real" medicine. They also control the Education of Physicians through "Philanthropic" Grants to Universities that endow chairs in this or that specialty. In addition, a majority of Physicians receive their education about Drugs from the Pharmaceutical Salespeople who call on them. Finally, these powerful Corporate Entities Control What Research Will - and what research will not - be funded and carried out by the Institutions and Individuals Who Are Dependent on their Financial Largesse. There are many people who have contributed to the health revolution now underway. **My introduction to Energy Medicine began with the study of Sigmund Freud's pioneering discoveries about human unconscious life and sexuality, and advanced with my introduction to the bioscientific energy investigations of Wilhelm Reich. It was through Reich's science of the Life Energy; called Orgonomy. Reich called the Life Energy orgone energy, because he discovered it through his investigations of human sexuality and the function of the orgasm, and because he found that the Life Energy charged organic substances.**

> ***"I am well aware of the fact that the human race has known about the existence of a universal energy related to life for many ages. However, the basic task of natural science consisted in making this energy usable. This is the sole difference between my work and all preceding knowledge."*** *- Dr Wilhelm Reich, MD, Archives of the Orgone Institute*
>
> *"There was no doubt of the existence of an energy possessing extraordinarily high biological activity. It remained only to discover what its nature was and how it could be measured." - Dr Wilhelm Reich, MD, in "The Cancer Biopathy", 1948.*

Dr Reich's investigations of the orgone energy offer a comprehensive view of the life energy found in no other body of work. Previously, **the Life Energy was a principle; with Reich's work, the Life Energy became demonstrable with scientific equipment, measurable and usable in health and healing.** Dr Wilhelm Reich, MD, trained American physicians in his Therapeutic Techniques; and pursued his investigations of Orgone Energy.

This research included:

1. Treating cancer mice with bion injections.
2. Developing a cancer serum from bion cultures.
3. Finding a way to isolate and collect orgone energy from bions in order to study its functions and make it more usable.

And since **orgone radiation from the bions seemed to permeate all substances**, Reich was constantly confronting questions about the origins of this energy.

Where did Orgone Energy come from?

> *"In medical school, and especially during my psychiatric residency, I kept turning to Wilhelm Reich's work. So far as I was concerned,* ***Reich was a giant, the first person I knew to make the connections between political oppression, emotional suffering and disturbed biological functioning."*** *- Dr James S. Gordon, MD, Director of the Center for Mind-Body Medicine in Washington, DC.*

Ken Dychtwald, PhD, the author of Bodymind, wrote:

> ***"Much that Wilhelm Reich postulated 60-70 years ago has become recognized and appreciated worldwide. His breakthrough appreciation of the body-mind as a holistic unit set the stage for enormous advances and developments that have reshaped the fields of medicine, psychology, fitness and rehabilitation. As we turn the corner to a new millennium, Reich's pioneering work stands out as the 20th century's most innovative and comprehensive thinking regarding all of the ways in which the mind and body interact in states of health as well as disease."***

In his later work, Reich focused on what he called "The Children of the Future." He believed that the fate of the human race would be shaped by the character structures of these children.

He further believed that humanity could begin to find its way out of the current mess it is in if it focused its attention on loving, protecting and helping children find their own ways in life. "We cannot tell our children what kind of world they will or should build. But we can equip them with the kind of character structure and biological vigour which will enable them to make their own decisions, to find their own ways, to build their own future, in a rational manner", he wrote in 1950." - in "The New American Medicine", Journal of The Mindshift Institute, 8 December 2002.

The Medical Trade;
The Fata Morgana of Our Civilization

The Medical Trade Is An Ill-Fitting Mosaic of facts, Half Truths, and Many Conjectures with Little or No Intrinsic value, Many of which Turn Out To Be Self-Contradictory. This Creature, Called Medical Science, Is Based on Many Unsound Theories, and False Statements, for such statements Have Retard Progress of Human Civilization, and Have Diminished its Quality of Health & Life. People are Harmed and Killed by the Medical Trade Harmful Approached to the Treatment of Disease.

> ***"There's this Food Industrial Complex that's also tied into the Medical Complex. It's a Trillion Dollar Industry in and of itself. That's just on Chronic Disease."*** *- Dr Pedram Shojai, in "Interconnected", Docuseries, 2018.*

Fata Morgana is first observed in the desert by the traveller perishing with thirst, sees the most seductive mirage of an oasis, with its palm forests and bubbling springs; this view gives him new strength; he collects all his will power, and tries to get there and grasp this phantom, but the further he walks, the further it seems to recede. We now know; that this phenomenon is a phantom or illusion, of a morbid imagination, in a similar way to that of the Medical Trade. Thus, it is obvious to the intelligent mind, that the Medical Trade Is Mentally Unwell.

The Power that the Medical Trade has accumulated, and the Lies it tries to push as "truths"; Posses a Serious and Concerning Problem to Humans, and Animals alike, and the Effects on the Health of Humans and Animal Life Is Devastating.

This Are the Nefarious Effects of The Medical Trade Upon Civilization.

The Medical Trade School, has the cunning ability to convert at first look what can be perceived as a seemingly intelligent person, into a devious and nonsensical one. This makes for many with abnormal mind and dubious character. The Medical Trade; Does Inflicts Much Harm and Suffering to Humans, and Animal Life alike. It is known and proven; that the Medical Trade Treatment, Ensures Life Long Pain & Suffering, and Early Death. This makes the Medical Trade, A Devious and Nefarious Entity.

And, Nothing Good Can Be Obtained From Its Existence.

> ***"Who Healeth all thy Diseases."*** *- Psalm 103:3*

> ***"We must be content with what knowledge we can gain, and while using it as best we may, should realise, in all humility, how much there is we cannot know, and yet we cannot doubt.'*** *- Sir William Richard Gowers in "The Dynamics of Life", 1894.*

> ***"Truth needs no shield to shelter it; her own bare breasts are armour of proof against all daring darts of ignorance and pride; and therefore walks fearless in the midst of all those vollies of bitter words: whoever vaunts in putting on his harness.***
> ***Truth only triumphs in putting it off; this never quits the field without the garland. What is stronger than truth, whose going out is as the morning, and riseth up to a glorious day"*** *- Tobias Crisp in "Christ Alone Exalted", 1791.*

Medical Trade:
Bad Science, Bad Medicine

“What influences, do Pharmaceutical men, the Advertisements of Lobbies and Drug Companies, the Editors of Medical Journals, the Manufacturers of Medical Equipment, the partisans of particular treatment, the major Medical Organizations, in Medical Schools, and the Industries Who Profit from the health process have on the practice of health care and the creation of a safe, human environment?

Dr Ed Pinckney, MD talked about medical testing pointed out that 50% of all the medical costs in this country, are spent on Medical Tests which Are Often Useless and Frequently Dangerous.

In medical school, I learned the catechism of the Religion of Modern Medicine.

When asked a question by a patient, the proper response is: “Just trust me”.

When faced with a patient who offers information different from that you gave him, the proper response is: ‘‘What medical school did you go to?”

When faced with an older person: ‘‘What do you expect at your age?”

When trying to sell a hysterectomy: ‘‘What do you need your uterus for?

It’s just a sack for cancer.’’

Doctors have strange ways of speaking: “Mr. Smith suffered a negative patient outcome”: That means he died. Doctors have strange ways of thinking.

The impact of medical education is so powerful that we doctors develop different thinking patterns from the rest of the population.

Valium, the number one, all-time best-selling Drug, carries as its indications: tension, anxiety, fatigue, depressive symptoms, acute agitation, tremor, hallucinosis, skeletal muscle spasm, and spasticity.

Its Side Effects include:

1. **Fatigue.**
2. **Depression.**
3. **Confusion.**
4. **Tremor.**
5. **Hyperexcited states.**
6. **Anxiety.**
7. **Hallucinations.**
8. **Increased muscle spasticity.**

That poses problems. If I prescribe Valium, and it doesn’t work, do I double the dose, or discontinue the Drug? In addition, Valium is a very interesting Drug in terms of sexism, because 80% of the Valium prescriptions, are written for women. Apparently Doctors believe that women are born with a congenital Valium deficiency, that only they, the Doctors, can relieve!

When the Government First Mandated that the Prescribing Information for the Birth Control Pill Be Included In Each Package, The Sales of the Pill Dropped by 30%.

When Barbara Gordon wrote her book "I'm Dancing as Fast as I Can", Showing the Hazards of Valium Addiction, the sales of Valium dropped by 40%.

The Medical Trade Has A Different Set of Ethics Than The Rest of Us

The Religion of Modern Medicine (and its Doctors), Have A Different Set of Ethics Than The Rest of Us. We have been trained that honesty is the best policy. But Medicine Doesn't Believe That.

The Medical Trade Is Fundamentally Irrational And Scientifically Insupportable

The Entire Field of orthodox Oncology Will Disappear as Chemotherapy, surgery, and Radiation for Cancer Are Revealed As Fundamentally Irrational And Scientifically Insupportable. When the commercial laboratories that perform the great majority of tests were evaluated by the Center for Disease Control of the Public Health Service, it was shown that year after year the results of 1 out of every 7 tests were totally in error or, in some way, absolutely useless to apply to the patient being tested. At the present rate of testing, that amounts to more than 4 Million erroneous test results being reported back to doctors every day! A California study has revealed that the same tests, when performed in a Doctor's office, are even less accurate than when performed in licensed laboratories. As an example of test inaccuracy, an article in the Journal of the American Medical Association, disclosed that when 2 Diabetes Specialists, reviewed 334 patients who, as a result of Medical Tests, were told that they had diabetes, they Found that 50% of those Patients Were Wrongly Diagnosed, and Were Being Treated for a Disease They Did Not Have.

A Patient Stands A Better Chance of Recovering If He Is Never Diagnosed

A patient stands a better chance of recovering if he is never diagnosed.

Whenever doctors strike, throughout the world, the same result occurs:

The Mortality Rate Drops. 1st Strike was in Saskatchewan, Canada, in 1962.

2nd was in Los Angeles, where, according to Professor Milton Roemer of UCLA's School of Public Health, the Mortality Rate during that Strike Dropped by 17%.

3rd Strike was in Colombia, South America, where the Mortality Rate Dropped by 37%.

4th, and my favourite, Strike was in Israel when, during an 85 Day Strike, The Mortality Rate Dropped by 50%." - in "Dissent in Medicine 9 Doctors Speak Out", 1984.

Surgery Leads to Chronic Inflammation

> ***"Let me tell you right now, very clearly: surgery is a big deal! After any surgery, including cosmetic surgery, you are bruised, you are swollen, and you are scarred, both inside and out. Surgery damages you, leaving scar tissue behind that disrupts the flow of your essential fluids. Scar tissue is denser than regular tissue. It's tight and doesn't stretch like normal tissue. As a result, blood and other essential bodily fluids cannot flow through it. Inflammation relies upon those fluids to provide nutrients and remove its waste from the injury site."*** *- Dr Harvey Bigelsen, MD, in "Doctors Are More Harmful Than Germs", 2009.*

With Every Surgery Our Health Is Diminished

"Modern Medicine teaches us that early detection followed by aggressive treatment saves lives. But the thing we accept as "life" after this treatment is far less than a full, productive, creative, and enriching life. We are meant to disregard the fact that surgery creates permanent changes in our health.

We are meant to discard the notion that surgery has risks and effects.

> ***"The operation is already a lot for patients to take in. I don't know how much it occurs to them that there may be something worse than survival."*** *- Dr Margaret L. Schwarze, MD*

We gamble with a devil in the hope of winning back a full life; we are patched together and rebuilt, full of replacement parts. But instead of a full life, we have chronic disease, treatment effects, and, in medical-speak, sequelae; problems that crop up years later, Directly Related to a Past treatment.

No One Experiences Surgery and Remains In Full Health. With Every Surgery, injury, or trauma, our Health Is Diminished a Bit More." - Dr John Parks Trowbridge, MD, in "Doctors Are More Harmful Than Germs", 2009.

The Medical Trade Business Model To Prescribe Poisonous Drugs and Perform Needless Surgery

"Our experience with acute appendicitis, in which many appendixes had ruptured, indicated that "Rupture" of the Appendix resulted in Bacterial Contamination of the Peritoneum, but not in faecal leakage. Penicillin had just become available and with the cooperation of Captain Fulton, the Chief of Surgery, we observed 50 consecutive patients whose clinical signs and

symptoms made us quite sure that they had Ruptured Appendices. These we Treated with Massive Doses of Penicillin and No Operation.

None of these patients died of peritonitis. One had a fatal thrombosis of the entire portal system and eventually died of it, a complication that appendectomy could not have avoided. In all the rest, the diagnosis was confirmed by delayed operation, before the patients were sent back to duty.

We were convinced that Appendectomy Was Not A Necessary or even an Effective Treatment for Appendicitis if Penicillin were available.

Since that time, with more effective antibiotics, the indications for operation are even less. The only real problem is how to be sure that it really is appendicitis, and not something that demands surgical intervention.

In any event, from the time Appendectomy was introduced until the time that penicillin became available, the number of appendectomies done each year increased, and in almost direct proportion to the Increase in the number of Appendectomies there was an Increase in the Death Rate from Appendicitis per 100,000 people of the population.

In spite of this, even today, few patients or doctors Question the Value of Appendectomy. My position on this is as unpopular as Dr Mendelsohn's is when, at a meeting of pediatricians, he Warns Against Immunizations (Vaccines). There are other operations that are greatly overdone, notably thyroid-colectomy for benign disease. A similar Overuse of Surgery Exists in the Diagnosis and Treatment of lumps in the breast. Cysts are still being removed surgically instead of being aspirated in the office, and because needle biopsy is not always used in the diagnosis of breast lumps there are some surgeons who do open surgical biopsies on almost all patients with nodules.

In these, the incidence of cancer is perhaps only 1 in 10, whereas the incidence of Cancer in the practice of a surgeon who uses needle biopsy may be as high as 50%. Interestingly, the aspiration of nodules really pays off because, in the case of the breast, a cyst that is aspirated is cured, and does not refill. In the thyroid, too, many cysts are curable by aspiration.

Cancer of the breast is of course the classic example of a cancer that for a full century was over-treated, first by operations that were unnecessarily radical, then by radiation that was given more often than indicated, and now by chemotherapy given too often and for too long.

Health care in the United States has become a Mega-Billion Dollar Business.

It is responsible for over 12% of the gross national product.

Revenues from the Health Industry, which currently exceed $360 Billion a year, are second only to those of the Defence Industry. If corporations did not have control over their distributors (the physicians) they would not be able to guarantee profits to their stockholders.

The Drug Industry woos young medical students by offering them gifts, free trips to "conferences", and free "educational material." Young Physicians are offered research grants by drug companies. Medical Schools are given large sums of money for clinical trials and basic Pharmaceutical research.

Drug Companies Provide Funding for the Establishment of Hospital Buildings, Medical School Buildings, and "independent" Research Institutes.

Pharmaceutical Companies, by enlisting the aid of influential Academic Physicans, have gained control of the practice of medicine in the United States.

They now set the standards of practice by hiring investigators to perform studies which establish the efficacy of their products or impugn that of their competitors. The Food Industry, and the Pharmaceutical Industry Are Closely Allied. Drug Companies often manufacture the additives used by food processors in the manufacturing of their products.

The two Industries are "Regulated" by the same Federal Agency (FDA).

A prominent Professor of Nutrition at Harvard University recently published a number of studies proving that food additives do not cause hyperactivity in children. He publicly endorses the use of: Soft Drinks, Candy, and Food Additives for Children. He advocates that: Hyperactive Children Not Be Treated With Elimination Diets, But With Standard Drug Therapy.

Chemotherapy Does Not Work For The Majority of Cancers.

Documented Evidence, existing for over a decade, Shows that Chemotherapy Does Not Eliminate Breast, Colon, and Lung Cancers. Documented evidence has shown that studies reporting positive effects of chemotherapy in these tumors have been manipulated to such an extent that the possibility of fraud becomes very real. Most Cancer Chemotherapy Studies Consider Patients Who Die of Drug Toxicity as "unevaluable." These deaths are not factored into the survival statistics. A physician in California is practicing the standard of care when he treats a Colon Cancer patient with 5-fluorouracil, he will be Rewarded with an Insurance Reimbursement of 80% to 100%".

This is true despite the fact that many articles appearing in prestigious medical journals have shown that 5-Fluorouracil Does Not Work. The same physician Will Not Be Reimbursed for Treating the patient With High-Dose Vitamin C. He will be in jeopardy of losing his medical license. There is no evidence found in the medical literature supporting the claim that it is dangerous to use nutritional support in the treatment of cancer patients. However, there is voluminous literature supporting the scientific rationale for using this type of treatment. The incidence of Allergic Disease has been estimated at close to 30% of the total population. Allergy Testing and Treatment Is A Multi-Billion Dollar Market. Even a slight change in the way these diseases are treated, could result in a bonanza for certain special interest groups.

These groups include the Food Industry, the Pharmaceutical Industry." - in "Dissent in Medicine 9 Doctors Speak Out", 1984.

There is a Book by a Florida Surgeon where he states that he preformed treatment on more than 300 patients, administering only: Orange Juice, Enemas, and Rest. And lost none. Only if very few cases, he operated.

See also: "The Treatment Of Some Forms Of Appendicitis At Plombieres Without Operation", The Lancet, 3 March 1900.

> ***"The marketing that's happened with Medicine, and the takeover, and the capture of our Industries, and also the knowledge and who gets to produce the knowledge, it has gone to such an edge, where if you naively walk into those institutions you may not come out again. We see this more and more because it is operating kind of like a death cult. If you apply the book treatment you know suppress the symptoms strongly you get to ring the bell, and become a hero. You get to write papers, and make things that are pretty in books. That you've saved lives in all of this sort of gallivanting. But ultimately the real issue is that in those cases camera lapsed, and that is not followed through with. So, 9 times out of 10, those people will die an early death, because of the suppression. This is where the awareness needs to build, and I don't believe it's going to come from top down, like corporations and people who are dependent on that for their livelihoods are going to turn around and say: "whoops we've got it all wrong, and it's been wrong for hundreds of years. What are we going to do we better stop, and take hard look at ourselves, and change", of course no. it is not going to happen like that. There's too much money, and too much power and control involved, it has to be us, where we decide the way in which we treat ourselves."*** *- Amandha Vollmer, Bachelor of Science, Agricultural Biotechnology, University of Lethbridge, in "Does Contagion Really Exist?", Sovereign Collective Podcast, 11 June 2023.*

The Unnecessary Death of My Daughter

"A dad following God's calling on my life, after the **Unnecessary Death of my daughter at the hands of Medical Personnel.** My daughter Grace lost her life on 13 October 2021.

She was given 3 Contraindicated Medications:

1. Precedex (Side Effects: Blurred vision; Chest pain or discomfort; Confusion; Coughing; Dizziness; Dizziness, faintness, or light-headedness when getting suddenly up from a lying or sitting position; Headache; Irregular, fast or slow, or shallow breathing; Nervousness; Pale or blue lips, fingernails, or skin; Pounding in the ears; Slow or fast heartbeat; Sweating; Trouble breathing; Unusual tiredness or weakness.)

2. Lorazepam (Side Effects: Sedation; Dizziness; Asthenia; Ataxia; Local injection site reaction; Respiratory depression; Hypoventilation with IV use; Hypotension.)

3. Morphine (Side Effects: Constipation; Feeling or being sick (nausea or vomiting); Feeling sleepy or tired; Feeling dizzy or a sensation of spinning (vertigo); Confusion; Headaches; Itchy skin or a rash.)

Precedex, Lorazepam, and Morphine; In Under a 30 Minute Window.

And **when it came time to revive Grace**, we found out that the Doctor had put an illegal **Do Not Resuscitate Order** on her chart.

So **Death Certificate said that she Died of Acute Respiratory failure with Hypoxmia as a result of Covid-19 Pneumonia.** We're the first one in the entire country that exposes what happened.

We have a Wrongful Death claim.

We have a Medical Malpractice claim.

We have a Lack of Informed consent claim.

Doctor-Patient Privilege

Common law does not recognize doctor-patient privilege, but the privilege exists in all jurisdictions through Statutory Language. Iron Curtain of Laws, make it nearly impossible to hold Doctors and Hospitals accountable for their mistakes.

In 2013 the State of Wisconsin Court Records show that there where:

27,000 Patients Injured or Died.
Only 84 Lawsuits where Filed.
Of these only 22 Went to Trial.

Catastrophic Carelessness And Not Be Held Responsible

"When Governor S. W. yesterday signed the controversial: "I'm Sorry" bill.

Wisconsin patient safety took a radical turn for the worse.

By signing the bill it became even more difficult for patients and their families to prove medical malpractice. Under the new law, a healthcare worker who expresses fault, liability, or responsibility for a medical procedure that has gone horribly wrong will not have to explain that admission in court.

In fact, those words will never be used because the new law prohibits them from ever being used in a legal proceeding.

If the purpose of the trial is to discover the truth this law does just the opposite. It hides the truth.

Court Records show that the number of Wisconsin medical malpractice cases dropped significantly in the last decade. In 2013, only 140 people filed a medical malpractice suit in Wisconsin circuit court. Health care statistics support the conclusion that more than 27,000 Wisconsinites are injured or killed annually by medical negligence.

"I'm Sorry" takes the law out of the hands of judges and juries and hands it on a silver platter to the medical community." - in "Wisconsin's New "I'm Sorry" Law: A Giant Step Backward for Patient Safety", Wisconsin Association for Justice, 9 April 2014.

Wisconsin Statute 907.06

"907.06 Court Appointed Experts
(1) Appointment. The judge may on the judge's own motion or on the motion of any party enter an order to show cause why expert witnesses should not be appointed, and may request the parties to submit nominations. The judge may appoint any expert witnesses agreed upon by the parties, and may appoint witnesses of the judge's own selection.
(3) Disclosure of appointment. In the exercise of discretion, the judge may authorize disclosure to the jury of the fact that the court appointed the expert witness.
(5) As sub. (1) prevents a court from compelling an expert to testify, it logically follows that a litigant should not be able to so compel an expert and a privilege to refuse to testify is implied. A person asserting the privilege not to offer expert opinion testimony can be required to give that testimony only if:
1) there are compelling circumstances present;
2) there is a plan for reasonable compensation of the expert; and
3) the expert will not be required to do additional preparation for the testimony.

An exact question requiring expert opinion testimony and a clear assertion of the privilege are required for a court to decide whether compelling circumstances exist. Alt does not apply to observations made by a person's treating physician relating to the care or treatment provided to the patient. A medical witness must testify about the witness's own conduct relevant to the case, including observations and thought processes, treatment of the patient, why certain actions were taken, what institutional rules the witness believed applied, and the witness's training and education pertaining to the relevant subject. Subject to the compelling need exception recognized in Alt and Glenn, a medical witness who is unwilling to testify as an expert cannot be forced to give an opinion of the standard of care applicable to another person or of the treatment provided by another person." *- in "Wisconsin Statute 907.06", 2024.*

The Doctor Privilege Law

1. See Nothing!
2. Hear Nothing!
3. Say Nothing!

Even if the Doctor or Nurse See Wrongdoing.

The Medical Trade "Right To Kill", is Woven into The Cabal's Legal System Through State Statutes! In Wisconsin, Patients Lose 90% of Malpractice Lawsuits.

Wisconsin Statute 907.06, known as the Doctor Privilege Law, give Doctors the right to not testify against other Doctors." - Scott Schara, in "What is the Secret Purpose of the Legal System", 21 May 2025.

> ***"The PREP Act is Medical Malpractice Martial Law. The 2005 PREP Act Prevents People from Holding Corporations Accountable for the Pain and Suffering they cause during Presidentially declared emergencies. Americans deserve the right to seek justice when Injured by government-mandated products. The PREP Repeal Act will restore that right."*** *- Rep. Thomas Massie (R-KY), in "PREP Repeal Act to End "Medical Malpractice Martial Law"," 15 July 2025.*

Trusting The Medical Trade Leads To Premature Death

"Research shows Americans have been programmed to:

"Trust the Science and the White Coat." Leading to Premature Deaths.

By studying the convergence of Medical Killing across multiple areas, including Hospitals, Elderly Care Facilities, the "Jab Agenda", and more.

I've noticed a clear pattern. The Medical Establishment, backed by Coercive Government Government Policy. Financed and supported by Big Business, is undertaking a "soft genocide." They look at what they are doing as "Hastening Death", but that's just another way of saying "Murder." Key Targets Include the Elderly and the Disabled. All must protect themselves against this Evil and Deadly Agenda." - Scott Schara, in "Medical Murder Outpaces Heart Disease and Cancer, Becoming America's No.1 Cause of Death", 20 September 2023.

Would Have Been Alive Today: If Had Not Gone To The Hospital

"I've been a Christian for roughly 30 years, but I was not awake, and so, I think the Hospital is a safe zone. This isn't a place to get well.

But I would have never thought; that they are a Killing Field.

I was not awake to any of this. So, the reality is if I would have been awake at that time, Grace would be alive today, I know that with a 100% certainty.

First of all, if we would have never taken Grace to the Hospital, she'd be alive today. Second of all, if the emergency room physician who said to me:

"Scott, let's check Grace into the Hospital for 3, 4 days, put her on Oxygen, and then she can come home."

If they would have just done that, Grace would be alive today.

So, first, we were not awake at number 1, that's why Grace is in the Hospital.

Number 2 is this Spirit of Fear, so the Medical Trade Propaganda did get to me. So our sense was were going to get Covid.

I had no idea Covid-19 was a Psychological Operation.

At this point I thought it's a "virus", now I know it wasn't.

But psychologically, I had bought into this fear narrative.

And so, my daughter, her Oxygen level dropped to 88%.

We got to take her to the hospital because the "Front Line Covid-19 Critical Care Alliance"; (FLCCC) protocol says if it drops below 94% admit yourself to the Hospital.

It's so stupid when I look at it now because Oxygen saturation drops when you're sick. When you have a Cold Flu, it drops.

But I didn't know this. If I would have been critical thinking I would have said "why are we even measuring this number because we have no baseline, there's no reason to measure it", and if we would have never measured that number Grace would be alive today.

I was with her from 6 to the 10 October 2021.

And I was taken out by an Armed Guard on the 10th.

We had 47 hours then without an advocate in the room.

And during that 47 hours, we found out by looking at the Records, that they started Grace on a Sedation Medication called Precedex on 9 October 2021.

(Precedex Side Effects: Blurred vision, chest pain or discomfort, confusion, coughing, dizziness, faintness, headache, irregular fast or slow or shallow breathing, nervousness, pale or blue lips, fingernails, or skin pounding in the ears, slow or fast heartbeat, sweating, trouble breathing, unusual tiredness or weakness.)

They increased the dose of Precedex 6 different times.

Ultimately Grace was surprisingly still doing fine in in spite of being sedated. Her last day, 13 October 2021. That day started about 10:00 AM.

The doctor called. Interestingly, in this timeline,

My daughter Jessica she told the nurse, "I'm going to take a shower."

There's a shower right in the room. The nurse insisted that Jessica leave, not stay in the room. This nurse had 14 years of ICU experience.

So, she tells Jessica "You've got to leave."

When Jessica comes back, she overhears the Doctors and Nurses in the hallway say: "The family's not going to like this."

So she says: "What aren't they going to like?"

And they said: "Well, we had to restrain", which means strap Grace down to the bed while you were gone. And so she said: "What's the reason?"

Grace wanted go to the bathroom, so we had to strap her down.

They made Grace defecate in the hospital bed.

What's interesting, is that the doctor tells us just the opposite.

So, he's on the phone and says: "Grace had such a good day yesterday, we

should work on nutrition. Let's get her out of bed. Let's get her watching TV so that in the next 3, 4 days she can be home." Well, they had already strapped her down to the bed, when he told us: "Let's get her out of bed." He writes the order to increase the Precedex to the maximum allowable dose. Simultaneous he writes a Do Not Resuscitate order on Grace's chart. If you look at the timeline that was 8 minutes after increasing the Precedex to the maximum allowable dose. If you look at Grace's Death Certificate, it says the first Cause of Death is "Acute Respiratory Failure" with Hypoxia. If you looked at the Precedex package insert, it says if you use this Drug for more than 24 hours, it will cause "Acute Respiratory Failure". So, it was a direct Cause and Effect. The second cause of death listed on her death certificate is Covid-19 Pneumonia. That's A Complete Lie. But they, the Hospital received USD $13,000 Death Bonus for listing it that way. The way she died was: they combined Procedex, with Lorazepam and Morphine in a 29 minute window, which is what you do, to Euthanise somebody, in their last hour of hospice care. (Side Effects of Lorazepam: Sedation, Dizziness, Asthenia, Ataxia, Respiratory depression, Hypotension, Fatigue, Amnesia, Confusion, Disinhibition, Irritability, Diplopia, Dysarthria, Constipation, Incontinence, Urinary retention, Dystonia, In rare instances, Lorazepam can cause Acute Liver Injury. **Drug-Drug Interactions: Lorazepam interacts with other Drugs, leading to Central Nervous System Depression**). **A friend of mine called me and said: "Scott, you better get the Records because that night of Grace's Death, one of the Nurses walked out." One of the Nurses had Grace's belongings, and she said to my wife, me and several of the Nurses don't think Grace should have Died today. I went through these records and she didn't just Die, they Killed her."** - Scott Schara, in "Exposing Medical Murder w/ Grace's dad Scott Schara", The Courtenay Turner Podcast, 2023.

Hazards Associated With Hospital Care

"Based on 1984 data developed from reviews of Medical Records of patients treated in New York Hospitals, the Institute of Medicine estimated that up to 98,000 Americans Die Each Year From Medical Errors. The basis of this estimate is nearly 3 decades old; herein, an updated estimate is developed from modern studies published from 2008 to 2011. Using a weighted average of the 4 studies, a lower limit of 210,000 Deaths Per Year Was Associated with preventable Harm in Hospitals. Given limitations in the search capability of the Global Trigger Tool and the incompleteness of Medical Records on which the Tool depends, The True Number of Premature Deaths Associated With Preventable Harm to Patients was estimated at More Than 400,000 Per Year. Serious Harm seems to be 10- to 20-fold more common than Lethal Harm. The Epidemic of Patient Harm in Hospitals must be taken more seriously if it is to be curtailed." - in "A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care", Journal of Patient Safety, September 2013.

Health Careless

"In 2009, Burrows's mother, Judie, fell while bike riding.

After undergoing surgery that presumably repaired the damage, she returned home and during a prolonged and painful recovery fell and broke her hip again. During a second hip surgery, performed despite the fact she was taking a blood-thinning medication, she lost half her blood, fell into a coma, and suffered Permanent Brain Damage. Virtually Impossible to Sue Doctors or Hospitals. Burrows was skeptical about the quality of care his mother had received and engaged in a 10-year investigation that he wisely recorded as a documentary. During his frustrating search for justice he encountered a venal and ruthless Corporate Network of Hospitals Protected by State and Federal Laws Making it Virtually Impossible to Sue Doctors or Hospitals for Malpractice. Burrows discovers that his mother was cared for in a robotized "e-ICU" unit. Most shocking is the extent to which physicians and other medical professionals were willing to bend the truth to cover for one another.

Judie's Physician proceeds to lie in order to protect himself, his colleagues and The System he works for. After years of disappointment, Burrows finally gets his day in court. Total Lack of Accountability Awaiting the verdict, he reflects that "because of a Total Lack of Accountability on anyone's part, Mom has become a Cottage Industry for 150 Doctors, 7 Hospitals, and 10 Law Firms; Spending every Penny she saved Paying for their mistakes."

"Bleed Out" is required viewing at a time when the future of health care looks dark indeed." - in "Finding Holiness, Confronting Negligence, Documenting Destruction", The Boston Globe, 20 December 2018.

The Medical Trade "Treatment"

Only the uneducated, goes to the Medical Trade for treatment.

For he who seeks Medical Trade "treatment", will suffer the side effects of its "treatment" (Pharmaceutical Medication and Vaccines), for the rest of his life; along with Prolonged ill health, and Worsening of quality of life.

For this is no secret, and even so, the uneducated still stubbornly persists with naive belief in the "Mumbo Jumbo", that the Medical Trade tells him.

One must not underestimate the Medical Trade Sect, for its level of deceit is monumental. The Medical Trade, are destroying lives, by poisoning peoples blood and organs, intoxicating their livers; and damaging their kidneys; by administering endless stream of Pharmaceutical Chemicals; and endless body Mutilations are performed daily by the Surgery of the Medical Trade.

1 in 3 On Pain Killers & 1 in 5 On Antidepressants

"Scotland is a country of dependence, the Scottish Government harbour a short life working group or Prescription Medication Independence and Withdrawal. They had a consultation and draft recommendations, because the population of Scotland is also hooked on Benzodiazepines Z-Drugs (insomnia, anxiety), which include Sleeping Tablets and it's a symbol of similar defects to Benzodiazepines. The other things Gabapentin (pain), Pregabalin (pain), Opioids, and Antidepressants. About 1 in 3 of the population have received a prescription from one of the five classes of these drugs. And about 1 in 5 of the population is on Antidepressants." *- Dr Bruce Scott, Psychoanalyst, in "UK Column", 10 July 2023.*

"Depression is Associated with many Chronic Health Problems. This type of association and comorbidity seems almost ubiquitous. It is stunning that Depressive Disorders ARE Comorbid with such a vast array of numerous Health Problems and Diseases." *- in "The Oxford Handbook of Depression and Comorbidity", 2014.*

NHS: The Socialist Medical Trade Paradise

The UK population has at least 1/3 of its population taking Pharmaceutical Medications. A Nation to place its health in the hands of the Medical Trade, this is indeed what happens to such nation.

NHS Pays Negligence Compensation £2 Billions Every Year

"It is unsustainable for the National Health Service in England to pay out more than £2 Billion in negligence payments every year, a figure that will double in 10 years if left unchecked." *- in "MPs urge radical reforms to negligence compensation system that costs NHS billions each year", UK Parliament, 28 Apr 2022.*

"According to NHS Resolution, NHS compensation payouts in 2021/22 amounted to £2.4 Billion. This is an increase on the previous year's figure of £2.2 Billion. Just over a quarter of the £2.4 Billion is spent on legal costs." *- in "Blackwater Law", 2 November 2022.*

NHS Healthcare Associated Infection: £2.7 Billion Per Year

"In 2016/2017, Healthcare Associated Infection, were estimated to have cost the NHS an estimated £2.1Billion, of which 99.8% was attributable to Patient Management. When the framework of the model was expanded to include all NHS Hospitals in England (adding specialist hospitals), estimated Healthcare Associated Infection in 2016/2017 cost the NHS £2.7 Billion." *- in "Modelling the Annual NHS Costs and outcomes Attributable to Healthcare-Associated Infections in England", BMJ Open, 20 January 2020.*

NHS Fraud: £1.326 Billion Per Year

"Figures suggesting the yearly Bill for Fraud in the NHS topped £1Billion. Analysis estimated that £1.25 Billion of fraud is being committed each year by patients, staff and contractors." *- in "Fraud costs NHS in England £1Bn a year", BBC News, 1 November 2017.*

"We estimate the NHS £1.346 Billion worth of fraud each year." *- in "NHS Counter Fraud Authority", NHS, April 2026.*

Hospital Acquired Pneumonia
£2.8 Billion Per Year

"Hospital Acquired Pneumonia is the most common type of Healthcare Associated Infection, accounting for 21.4% of all Infections Acquired In The Hospital setting. It has been estimated that Healthcare Associated Infection Cost the National Health Service (NHS) England up to £2.8 Billion Per Year." *- in "The incidence risk of Hospital acquired pneumonia and associated mortality in England between 2018 and 2023", Project Report, NHS, 2 July 2023.*

NHS Clinical Claims 2012/2013

"Fatality (Deaths) 947:
Psychiatric / Psychological Damage 319."

- in "Number and Cost of Clinical Claims Closed between financial years 2012/13 and 2023/24", NHS Resolution, Freedom of Information Request# 7200, 4 May 2025.

Many Tragic Incidents of Patient Harm

"Settlement Costs for Clinical Negligence have tripled since 2006–2007 and the Government has a staggering £60 Billion of liabilities on the balance sheet. Annual Payments for Clinical Negligence are expected to exceed £4 Billion by the end of the decade. Behind these costs lie Many Tragic Incidents of Patient Harm." *- in "Costs of Clinical Negligence", UK Parliament, 30 January 2026.*

"Now at £60 Billion, the Government's liability for Clinical Negligence claims has increased in real terms from £14.4 Billion since 2006-2007, and is the second largest provision on the government balance sheet. The annual cost of settling Clinical Negligence claims has More Than Tripled over the past 2 decades; from £1.1 Billion in 2006-07, to £3.6 Billion in 2024-25." *- in "Cost of settling Clinical Negligence claims has more than tripled in last two decades", National Audit Office, UK, 17 October 2025.*

Multiple Chronic Diseases

"Estimates of diagnosed single, and Multiple Chronic Conditions among the non-institutionalized, civilian US adult population (2018 National Health Interview Survey). 51.8% Adults had at least 1 of 10 selected diagnosed Chronic Conditions (Arthritis, Cancer, Chronic Obstructive Pulmonary Disease, Coronary Heart Disease, Asthma, Diabetes, Hepatitis, Hypertension, Stroke, Weak or Failing Kidneys), and 27.2% US adults had Multiple Chronic Conditions." *- in "Prevalence of Multiple Chronic Conditions Among US Adults, 2018", Prev. Chronic. Dis., 17 September 2020.*

Prevalence of Chronic Conditions is Increased Steadily

"Data from the Behavioral Risk Factor Surveillance System, for the odd years from 2013 to 2023 for all states.

Chronic Conditions: Heart Disease, Cancer, Stroke, and Diabetes are costly, and Major Causes of Death, and Disability.

Over the past 20 years, the prevalence of Chronic Conditions has Increased Steadily, and this trend is expected to continue. In 2018, 76.4% of US adults had at least 1 Chronic Condition, and 51.4% had 2 or More Chronic Conditions.

In 2016, the total health care costs for the treatment of chronic health conditions was $1.1 Trillion. Approximately 6 in 10 young, 8 in 10 midlife, and 9 in 10 older US adults report 1 or more chronic conditions.

Trends in conditions worsened among young adults during 2013–2023.

In 2023; 194 Million (76.4%) of US Adults; Have 1 or More Chronic Conditions:

59.5% of Young Adults.
78.4% of Midlife Adults.
93.0% of Midlife Adults.

In 2023; 130 Million (51.4%) of US Adults; Have Multiple Chronic Conditions:

27.1% of Young Adults.
52.7% of Midlife Adults.
78.8% of Midlife Adults.

Among young adults 2013 to 2023, prevalence increased significantly 52.5% to 59.5% for 1 or More conditions; and 21.8% to 27.1% for Multiple Chronic Conditions." - in "Trends in Multiple Chronic Conditions Among US Adults, By Life Stage, Behavioral Risk Factor Surveillance System, 2013–2023", Prev. Chronic. Dis., 17 April 2025.

Maintenance Therapy to Prevent Disease, Promote Health, Prolong Quality of Life: Is Not Medically Reasonable or Necessary

"Part 3 - Claims Process:

2251.3 Necessity for Treatment.

B. Maintenance Therapy - Chiropractic Maintenance Therapy Is Not Medically Reasonable or Necessary and is Not Payable under the Medicare program. Maintenance Therapy include Services that seek to Prevent Disease, Promote Health and Prolong and Enhance the Quality of Life, or Maintain or Prevent Deterioration of a Chronic Condition." *- in "Carriers Manual", Centers for Medicare & Medicaid Services, United States* ***Department of Health & Human Services****, 27 June 2003.*

Vaccines

"The public is surely entitled to convincing proof, beyond any reasonable doubt, that artificial immunization is in fact a safe and effective procedure, in no way injurious to health, and that the threat of the corresponding natural diseases remains sufficiently clear and urgent to warrant mass inoculation of everyone, even against their will if necessary.

Unfortunately, such proof has never been given.

> ***"If mortality (from pertussis) continues to decline at the same rate during the next 15 years, it will be extremely difficult to show statistically that (pertussis immunization) had any effect in reducing mortality from whooping cough."*** *- Dr C. C. Dauer, MD, 1943.*

> ***"It is barely recognized, but nevertheless true, that animals and plants, as well as men, can live peacefully with their most notorious microbial enemies. The world is obsessed by the fact that poliomyelitis can kill and maim several thousand unfortunate victims every year. But more extraordinary is the fact that millions upon millions of young people become infected by polio viruses, yet suffer no harm from the infection. The dramatic episodes of conflict between men and microbes are what strike the mind. What is less readily apprehended is the more common fact that infection can occur without producing disease."***

In another recent outbreak of pertussis, 46 of the 85 fully immunized children studied eventually contracted the disease (Medical Tribune, 10 January 1979).

In 1977, 344 new cases of measles were reported on the campus of UCLA in a population that was supposedly 91% immune, according to careful serological testing. Another 20 cases of measles were reported in the Pecos, New Mexico, area within a period of a few months in 1981, and 75% of them had been fully immunized, some of them quite recently. Because the vaccine is a "trick", in the sense that it simulates the true or natural immune response developed in the course of recovering from the actual disease, it is certainly realistic to expect that such artificial immunity will in fact "wear off" quite easily, and even require additional "booster" doses at regular intervals throughout life to maintain peak effectiveness. Such an explanation would be disturbing enough for most people. For all of these reasons, the greatest favour we could do for our children would be to expose them all to the measles and mumps when they are young, which would not only protect them against contracting more serious forms of these diseases when they grow older, but would also greatly assist in their immunological maturation with minimal risk. I need hardly add that this is very close to the actual evolution of these diseases before the MMR Vaccine was introduced." - in "Dissent in Medicine 9 Doctors Speak Out", 1984.

Vaccination Increases The Risk of Dying

"In spite of being protected against 3 deadly diseases, the introduction of Diphtheria-Tetanus-Pertussis (DTP) Vaccine was Associated with Increased Overall Mortality. Children Who Received DTP Vaccine Had 5 Times Higher Risk of Dying, than those who didn't. And this is just one example of many

studies now done of DTP Vaccine. And They All Show The Same. DTP Vaccinated Children Have Higher Mortality than those who didn't get DTP Vaccine. So it appears that DTP Vaccine has negative non-specific effects. The protection against the 3 deadly diseases comes at a very high price, namely increased risk of Dying. So with the best of intentions, the use of DTP Vaccine May Kill More Children Than It Saves. I know these results are extremely uncomfortable and most people, including myself, just wish they weren't true, but this is what the data tells us." - Christine Stabell Benn, Professor Odense Patient data Explorative Network at the Faculty of Health Sciences, Professor and Head of the Bandim Health Project, Professor of Global Health, University of Southern Denmark, in "How Vaccines train the immune system in ways no one expected", TEDxAarhus, 2018.

People Were Being Hurt

> ***"There is not one person in Public Health who was like: "This Is Crazy." Like: "Where is the science to support this?" And, "Why are we Suppressing Evidence That People Being Hurt By It?" Which they were. They literally Suppressed the Evidence People Were Being Hurt. These Are Facts. And it's so horrible that no one can kind of face it. There were No Public Health Officials in the United States who said: "I Can't In Good Conscience Go Along With Something This Evil." None."*** *- Tucker Carlson, in "Jack Neel Podcast", 24 June 2026.*

The Medical Trade Never Open Its Mouth Without Subtracting From The Sum of Human Knowledge

> ***"They never open their mouths without subtracting from the sum of human knowledge." - Thomas Brackett Reed, Speaker of the House, in "Congressional Record", 18 October 1939.***

57% Experience Medication Side Effects

> ***"The report, published in June 2025, found that that just 10% of people who experienced Medication Side Effects reported them through the Yellow Card scheme. Of the 563 responses received, 57% said they had Experienced a Side Effect or unintended effect from a Medicine, the Report found. In addition, 84% had spoken to a Doctor, Nurse or Pharmacist about Medication Side Effects, while 29% had spoken to family and friends."*** *- in "Only 1 in 10 people report Side Effects, Healthcare Improvement Scotland warns", The Pharmaceutical Journal, 8 August 2025.*

Physicians Have Been Known To Use Deception With Their Patients And With Third Parties

"Lying Is Morally Problematic, Physicians Have Been Known To Use Deception With Their Patients And With Third Parties.

Little is known, however, about the Use of Deception between physicians.

We developed a survey to assess physicians attitudes toward Using Deception in Their Interactions with colleagues. The survey was drafted by first generating a list of situations in which internal Medicine residents might be motivated to Deceive a colleague, 36% indicated they were likely to use Deception to avoid exchanging call, 15% would Misrepresent a diagnosis in a Medical record to protect patient privacy, 14% would Fabricate a laboratory value to an attending physician, 6% would substitute their own urine in a drug test to protect a colleague, and 5% would Lie about checking a patient's stool for blood to Cover Up a Medical Mistake.

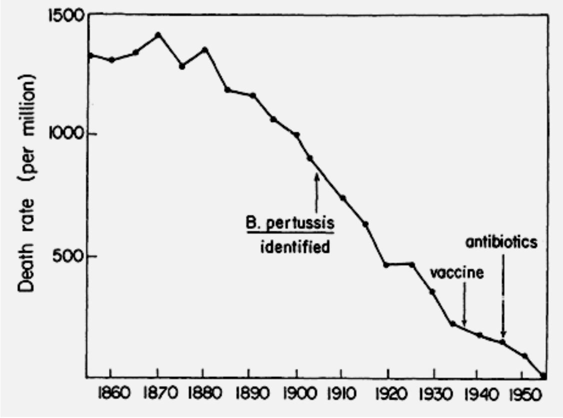
For some of the scenarios, the likelihood of deceiving was influenced by variations in the vignettes. A substantial percentage of internal Medicine residents report they would Deceive a colleague in various circumstances, and the likelihood of using Deception depends on the context." - in "Lying to Each Other", Arch. Internal Medicine, JAMA, 2000.

Doctors Lying To Each Other

> ***"Readers will not be amused at this article either, for it addresses a delicate issue seldom raised in the literature: Doctors Deceiving Each Other: 65% (15 of 23) respondents said they had Deceived Colleagues."*** *- in "When Doctors Deceive Each Other", British Medical Journal, 20 February 2010.*

The Medical Trade Half Truths

"Why were we falling?



Mean annual Death Rate from Whooping Cough in children under 15 years of age England and Wales.

First we had accepted some half truths and had stopped searching for the whole truths. The principal half truths were that medical research had stamped out the great killers of the past: tuberculosis, diphtheria, pneumonia, puerperal sepsis, etc..., and that medical research and our superior system of medical care were major factors in extending life expectancy, thus providing the people with the highest level of health available in the world. That these are half truths is known but is perhaps not as well know as it should be." - Dr Edward H. Kass, MD, Harvard Medical Unit, Department of Medical Microbiology, Boston City Hospital; Department of Medicine, Harvard Medical School, in "Infectious Diseases and Social Change", Journal of Infect. Diseases, January 1971.

The Social Production of Disease and Illness

"While the overriding theme is **"The Social Production of Disease and Illness"**, each section develops a particular aspect of **the sociology of disease production.** For the purposes of this book **we define Disease as the Biophysiological Phenomena; which manifest themselves as changes in and malfunctions of the human body. Illness, on the other hand, is the experience of being sick or diseased.** Accordingly, **we can see disease as a physiological state and illness as a social psychological state presumably caused by the disease.**

Thus, pathologists deal with disease, patients experience illness, and, ideally, clinical physicians treat both. (cf. Cassell, 1979.)

Furthermore, such a distinction is useful for dealing with the possibility of people feeling ill in the absence of disease or being "diseased" without experiencing illness.

Obviously disease and illness are related, but separating them as concepts allows us to explore the objective level of disease and the subjective level of illness.

How disease and illness are socially produced. The so-called "Medical Model" focuses on organic pathology in individual patients, rarely taking societal factors into account. Clinical Medicine locates disease as a problem in the individual body, and it Provides An Incomplete, and sometimes Distorted Picture. With the increased concern about chronic disease and its prevention (U.S. DHEW, 1979), **the Interaction Between External Environments In Which People Live, And The Internal Environment of the Human Body; Will Yield New Insights Into Disease Causation and Prevention.** Medicine is usually credited for the great victory over infectious diseases. After all, certain scientific discoveries (e.g., germ theory) and medical interventions (e.g., vaccinations and drugs) had been developed and used to combat infectious diseases and, so the logic goes, must have been responsible for reducing deaths from them. While this view may seem reasonable from a not too careful reading of medical history, **It Is Contradicted By Some Important Social Scientific Work.** Rene Dubos (1959) **was one of the first to argue that it was social changes in the environment rather than medical interventions that led to the reduction of mortality by infectious diseases.** He viewed the 19th-century **Sanitary Movement's campaign for Clean Water, Air, and Proper Sewage Sisposal, as a Particularly Significant "Public Health" Measure.** Thomas McKeown (1971) showed that **Biomedical Interventions Were Not The Cause of the Decline In Mortality in England and Wales** in the 19th century. **Discoveries and interventions by clinical medicine were not the cause of the decline of mortality for various populations.**

Rather Social and Environmental Factors Such As:

1. **Sanitation.**
2. **Improved Housing and Nutrition.**
3. **A general rise in the Standard of Living, Were The Most Significant Contributors.**

Social Factors appear much More Important Than Medical Interventions in the "conquest" of infectious disease. John B. McKinlay and Sonja M. McKinlay assess "Medical Measures and the Decline of Mortality." **They offer empirical evidence to support the limitations of medicine argument, and point to the social nature of disease.** We must note that mortality rates, which are the data on which they base their analysis, **only crudely measure "cure" and don't measure "care" at all. But it is important to understand that much of what is attributed to "medical intervention" seems not to be the result of clinical medicine per se** (cf. Levine et al., 1983). The limitations of medicine argument underlines the need for a broader, more comprehensive perspective to understanding disease and its treatment (see also Turshen, 1977); a perspective that focuses on the significance of social structure and change in disease causation and prevention.

> ***"By the time laboratory medicine came effectively into the picture the job had been carried far toward completion by the humanitarians and social reformers of the 19th century. Their doctrine that nature is holy and healthful was scientifically naive but proved highly effective in dealing with the most important health problems of their age. When the tide is receding from the beach it is easy to have the illusion that one can empty the ocean by removing water with a pail."*** *- R. Dubos, in "Mirage of Health", 1959.*

The Questionable Effect of Medical Measures on the Decline of Mortality

Everyday practitioners of medicine, on their own altruistic or "Scientific" grounds and still perhaps unwittingly, serve present-day institutions (hospital complexes, university medical centers, pharmaceutical houses, and insurance companies), **by spearheading an assault on a most fundamental challenging heresy of our time: that the introduction of specific medical measures and / or the expansion of medical services are generally not responsible for most of the modern decline in mortality**. Employing the data and techniques of historical demography, McKeown (a physician by training) has provided a detailed and convincing analysis of the major reasons for the decline of mortality in England and Wales during the 18th, 19th, and 20th centuries (McKeown et al., 1955, 1962, 1975). For the 18th century, he concludes that **the decline was largely attributable to Improvements in the Environment.**

His findings for the 19th century are summarized as follows:

> ***"The decline of mortality in the second half of the 19th century was due wholly to a reduction of deaths from infectious diseases; there was no evidence of a decline in other causes of death.***
> ***Examination of the diseases which contributed to the decline suggested that the main influences were:***
> ***1. Rising standards of living, of which the most significant feature was a better diet;***
> ***2. Improvements in hygiene; and***
> ***3. A favourable trend in the relationship between some micro-organisms and the human host.***
> *[Medical] Therapy Made No Contributions, and the effect of immunization was restricted to smallpox which accounted for only about 5% of the reduction of the death rate.*
> ***The Main Influences on the decline in mortality were Improved Nutrition on air-borne infections, reduced exposure (from Better Hygiene) on water and food-borne diseases and, less certainly, immunization and therapy on the large number of conditions included in the miscellaneous group. Since these 3 classes were responsible respectively for nearly 50%, 17%, and 10% of the fall in the death rate, it is probable that the Advancement in Nutrition Was The Major Influence."*** *- McKeown et al., 1975.*

Around 1930, there were several limited discussions of **The Questionable Effect of Medical Measures on selected infectious diseases like diphtheria (Lee, 1931; Wilson and Miles, 1946; Bolduan, 1930) and pneumonia (Pfizer and Co., 1953).**

In a presidential address to the American Association of Immunologists in 1954 (frequently referred to by McKeown), Magill (1955) marshalled an assortment of data then available (some from England and Wales), to cast doubt on the plausibility of existing accounts of the decline in mortality for several conditions.

Probably the most influential work in the United States is that of Dubos who, principally in "Mirage of Health", 1959, "Man Adapting", 1965, and "Man, Medicine and Environment", 1968, focused on the **non-medical reasons for changes in the health of overall populations.**

In another presidential address, this time to the "Infectious Diseases Society of America", Kass, 1971, again employing data from England and Wales, argued that **most of The Decline In Mortality For Most infectious Conditions Occurred Prior To The Discovery of either: "the cause" of the disease, or some purported "treatment" for it. In general, medical measures (both Chemotherapeutic and Prophylactic) appear to have contributed little to the overall decline in mortality in the United States since about 1900 — having in many instances been introduced several decades after a marked decline had already set in, and having no detectable influence in most instances.**

More specifically, with reference to those 5 conditions (influenza, pneumonia, diphtheria, whooping cough, and poliomyelitis) for which t**he decline in mortality Appears Substantial After the Point of Intervention — and on the unlikely assumption that all of this decline is attributable to the intervention — it is estimated that at most 3.5% of the total decline in mortality since 1900 could be ascribed to medical measures introduced for the diseases considered here."** - in "The Sociology of Health and Illness Critical Perspectives", 1986.

The Decline In Mortality Is Unrelated To Medical Care

"That the introduction of specific medical measures and/or the expansion of medical services Are Generally Not Responsible for most of the modern decline in mortality.

> *"Examination of the diseases which contributed to the decline suggested that the main influences were: **1. Rising Standards of Living, of which the most significant feature was a Better Diet; 2. Improvements in Hygiene; 3. A Favourable trend in the Relationship between some Micro-Organisms and the human host. Therapy made no contributions**, and the effect of immunization was restricted to smallpox which accounted for only about 5% of the reduction of the death rate." - McKeown, 1975.*

> ***"The Main Influences On The Decline In Mortality Were: Improved Nutrition on air-borne infections, reduced exposure (from Better Hygiene) on Water- and food-borne diseases and, less certainly, immunization and therapy on the large number of conditions included in the miscellaneous group. Since these 3 classes were responsible respectively for nearly 50%, 17%, and 10% of the fall in the death rate, it is probably that the Advancement In Nutrition Was The Major Influence."*** *- McKeown et al., 1975.*

The Questionable Contribution of Medical Measures To The Decline of Mortality

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In another presidential address, this time to the Infectious Diseases Society of America, Kass (1971), again employing data from England and Wales, argued that **Most of the Decline in Mortality for most infectious conditions; occurred prior to the discovery of either "the cause" of the disease, or some purported "treatment" for it.**

One can reasonably draw the following conclusions from the analysis presented in this paper:

In general, Medical Measures (Both chemotherapeutic and prophylactic) appear to have contributed little to the overall decline in mortality in the United States since about 1900 — having in **many instances been Introduced several decades After a Marked Decline had already set in, and Having No Detectable Influence in most instances.**

More specifically, with reference to those 5 Conditions:

1. **Influenza.**
2. **Pneumonia.**
3. **Diphtheria.**
4. **Whooping cough.**
5. **Poliomyelitis.**

For which the decline in mortality Appears substantial After the Point of [Medical] Intervention (and on the unlikely assumption that all of this decline is attributable to the intervention), it is estimated that at most 3.5% of the total decline in mortality since 1900 could be ascribed to medical measures introduced for the diseases considered here. **If it can be shown convincingly, and on commonly accepted grounds, that the major part of The Decline in Mortality Is Unrelated to Medical Care Activities,** then some commitment to social change and a **reordering of priorities may ensue.** In this paper we have attempted **To Dispel the Myth That Medical Measures and the presence of medical services were primarily responsible for the modern decline in mortality."** - in **"The Questionable Contribution of Medical Measures to the decline of mortality in the United States in the twentieth century"**, Milbank Mem. Fund. Q. Health Soc., 1977.

The Absurdity of the Medical Trade

The reality is that the majority of individuals neglect to observe what they eat, and don't follow a Healthy Diet (and healthy lifestyle), then they run out of the essential nutrients, that the body needs, thus leading to body malfunction.

Then, they go to the only medicine their Insurance pays for, which is Medical Trade. But the Medical Trade so-called "Doctors" don't know anything about nutrition. They don't believe that the body can cure itself.

So, they give a drug, to "manage" the problem. But, the Drug in its "working", in the human body, also burns through nutrients.

Thus, giving Medical Trade Drugs so-called "Medications", just adds another Chemical that the body, that it has to eliminate.

Then, after 6 months, the Medical Trade Doctors will say that the "Medication" has "stops working", and they need to increase its potency, or they need to prescribe another Medical Drug, then the individual gets worse.

So, they will eventually say that another medication is needed, and then it gets even worse, and then person will need surgery, and then the person gets a secondary infection from the surgery, and it needs another Medical Drug for that, and then the person Dies. Afterwards their relatives are so grief-stricken, that they organise a charity run on the persons behalf, to come up with a cure for the "disease". And to whom they give the money to? To the Medical Trade, the same exact people that failed them in the first place.

Aiding Others To Dismiss Error From Their Consciousness

With the Information that has been given, now there should be rather those agreements, by the Study of that given; and thus from same form the questions as might be expressed in:

"Is it false or is it true?"

Else, the Emunctologist may become burdened with Knowledge, and have little of Wisdom, in making application of such Knowledge as to become helpful or beneficial to them. For, the Emunctologist in his study, this must be a practical thing; that it may be used by him as an individual in Aiding Others to Dismiss Error from their Consciousness, and in its place to (put not merely the wishful thinking), but activities of such a nature as to be helpful in same.

Let the approach be made by not other than the question, then:

"Is it true or false?"

Knowledge without the practical ability to apply same may become sin.

For, it is knowledge misapplied that was the fall, or the confusion, in Eve.

Keep the Mental Attitude as of constructive forces in the experience, knowing that all healing is of a divine source; and it is through the attuning of the mental and spiritual body to Creative Forces that the physical may be corrected. Then use same as a witness to that creative force at all times.

Much Study, much Meditation is needed here.

Much has been given. As it is better understood, other books may be prepared on same which would prove not only interesting but most beneficial.

Continue with the study of same.

To Those Who Are Willing To Learn From A New Point Of View

> ***"In relation to disease, and the true principles and the means of cure, the most universal and lamentable ignorance prevails among mankind."*** *- Sylvester Graham, in "Lectures on the Science of Human Life", Vol. 2, 1839.*

From the Point of View of Truth:

For each individual, should be mindful on both; the amount, quality and quantity of its nourishment. The Function of the Emunctories is to remove waste, and, all that which is not needed, or that which hinders the body system.

Thus, be always mindful of the workings of all Emunctories, for, indeed, Poor Eliminations, from any one of these, will become a burden to another.

The Slower is the Capacity of any Emunctory to work, the Greater is the Accumulation of Waste in the Body System. And the longer this waste, remains in the body, the more it becomes an ideal living habitat for the multiplication of certain bacteria in the body ecosystem, thus, this leads to a drastic change in the Microbiome.

> ***'Two Enzymes produced by Gut Bacteria, can convert the common Blood Type A, into the universally accepted Type 0.'*** *- in "Microbiome Post", 5 July 2019.*

Bacteria As Such Are Not Harmful, But As Always: Their Metabolic Waste Is!

Thus, their excrement, combined with a large amount of delayed - retained - body metabolic waste, in any (or even worst), in all Emunctory:

Circulatory and Gastrointestinal Systems, this, thus becomes a Major Factor for the appearance of any Symptoms of Organic Disease.

Bacteria doesn't instigate disease, Bacteria only respond to their environment.

Due to its crucial importance, on how Bacteria, and Micro-organisms act upon the body, an entire chapter on the Microbiome has been added to this book.

Here, we use, the term "disease", for it has been implemented in the mind of the population, the individual, the society.

For indeed, and in Truth: "Diseases" Don't Exist, They Are Not Permanent.

All of these so-called "diseases" are curable.

Thus, these miss-called "diseases", are in Truth, Only Symptoms, the Signs that show the true present State, of each Body.

The greater the burden, or malfunctioning of same, the greater is the manifestation of Symptoms. The State of the Body System can be changed, by the correct and timely application, of the Therapeutic Principles of Emunctology, has laid down in the Book "Emunctology" 2021.

For, These Truths:

These Therapeutic Principles; Are The Things That Aid, That Enable the Body To Heal. This such Principles of Healing are Further Explained, and Reinforced in this present Book. This Book is thus presenting to the Emunctologist, the thoughts and studies, as are being presented, in this easily understood, emblematical, manner, the conditions as trying to be explained, that each, may gain a full and correct concept of the truths as are being given.

And remember, the rays of light are shed abroad, unto many, and, as has been given:

"In Him is light, and there is no darkness." *- 1 John 1:5*

For He came into the world that those in darkness might Gain the concept of the great light. Then, these lessons have been given, in that simple way and manner, that those who may study may be infinitely interested in their Individual Selves In Gaining The Knowledge Of How These Lessons May be correctly Applied in Clinical Practice.

And remember, whilst thou art in the flesh, Thou shalt labour and serve all man, but whenst Thou art come into the Spirit, Thou shalt be risen unto Him.

The Master, He made Himself of low estate that He might Gain the more.

He made Himself abased that he might bring others to that Light.

Others may laugh, may scoff, may even consider you simple minded, vague, uncouth, uncomely, unreasonable, and the light of the physical world, may look and ask at the efforts of one.

Remember that God looketh not in the outward appearance, but upon the heart; as has been given of old:

“Be thou faithful unto the end, would thou wear the Crown of Life.” *- Revelation 2:10*

There came unto the Master those that would say:

“This request we ask of thee. When thou comest into the kingdom, wilt thou that I sit on thy right hand, and my brother on thy left?”

And, as the reply comes:

“This is not for Me to give, but art thou able to drink of that cup that would merit that position? Art thou able to take on those conditions as would bring that full consciousness to that inmost being of yourself as to make of yourself no estate, that thou might serve others?”

Then, study these, Ponder these well in thine heart, for the glory of the Lord is ready to be shed abroad through thine own Physical efforts, that others may gain the better knowledge of Him.

“All that I know, or can know, or even think, is from the Fount of Knowledge, and I am only a recipient of it.’ *- in “The Divine Law of Cure”, 1884.*

“You can teach, you can lecture, you can write.
But Self Must be Eliminated.” *- Christ, The Lord*

“No one can teach, what they don't know.
You can only teach what you know.” *- Rui Alexandre Gabirro, Emunctologist*

“Various Theories and Explanations which are commonly adduced have been omitted, so that the student may approach the subject with an open mind, but with the assurance that all the movements described have been thoroughly tried and found useful. He will thus be in the advantageous position that he starts with no preconceived theories, and his mind will be unbiassed. In this manner we may ultimately arrive at the Truth.” *- Dr Thomas Marlin, MD, MB, DPH, RCPS, DMRE, in “Manipulative Treatment”, 1934.*

The final purpose of all Therapeutic and Clinical work, to-wit: to add to our positive knowledge of everything pertaining to the treatment and cure of disease. Whatever you Do; Do it Wisely, and Look to the End!

“Results, Not Theories, Count!” *- Dr George Starr White, MD, in “Think; Side Lights, What Others Say, Clinical Cases, etc.”, 1920.*

*“**There is, however, one reason for wonder,** for astonishment so deep as to close the door, as it were, to possible explanation, and that is: “**Why and how it is we have been left so long in ignorance”.**” - in “Electro-Pathology and Therapeutics: An account of many years Research Work”, 1914.*

“I come to you with a great message: with a message that may almost be beyond your belief: and yet is is true, and it should bring hope and comfort to very many.
The message is this: That Disease Is Curable. By the means of the Herbs, there is no ordinary disease known in this country which has not been cured.” *- Dr Edward Bach, MD, in “Lecture”, October 1936.*

The Medical Trade Is Useless In Preventing Disease

“Many other needs which add to the betterment of life, such as adequate income, Nutritious Foods, decent Housing, better educational opportunities, and the like. There is, in fact, much to suggest that improvement in any of these areas has a clear potential for improving health.

Indeed, many would argue that improvements in them would have a considerably greater positive impact on health than universally accessible primary medical care. It seems clear that during the last decade we have oversold health — or, more accurately, what the availability of adequate medical care can do to improve or maintain health.

Many adult illnesses, especially major ones, are accidents of nature, and we have little knowledge and only tentative ideas about how to avoid them.

In most instances, we are relatively Ineffective In Preventing Disease or Preserving Health By Medical Intervention.

We are unlikely to become more effective unless we learn a great deal more about the mechanisms of disease.

Several decades of heavy investment in training mental-health workers and developing mental-health centers have not made schizophrenia go away.

Nor has it been shown that readily available primary care, can maintain the general good health of a community.

Our present use of phrases such as “Health Maintenance” are conjuring up hopes that are not likely to be fulfilled, and we must clearly realize that more Medical Care Will Not In Itself Result In Better Health.” - Dr David E. Rogers, MD in “The Challenge of Primary Care”, Journal of the American Academy of Arts and Sciences, Winter 1977.

"The True Miracle of Modern Medicine Is Diabolical. It consists not only of making individuals but whole populations survive on inhumanly low levels of personal health. That health should decline with increasing health service delivery is unforeseen only by the health managers, precisely because their strategies are the result of their blindness to the inalienability of life." - *Ivan Illich, in "Limits to medicine", 1976.*

Medical Care Does Not Equal Better Health

"According to the Great Equation, Medical Care equals Health.

But the Great Equation is wrong.

More available medical care does not equal better health.

The best estimates are that the Medical System (doctors, drugs, hospitals) affects about 10% of the usual indexes for measuring health: whether you live at all (infant mortality), how well you live (days lost due to sickness), how long you live (adult mortality).

The remaining 90% are determined by factors over which doctors have little or no control, from individual life-style (smoking, exercise, worry), to social conditions (income, eating habits, physiological inheritance), to the physical environment (air and water quality).

Most of the bad things that happen to people's health, are at present beyond the reach of medicine." - Aaron Wildavsky, in "Doing Better and Feeling Worse: The Political Pathology of Health Policy", Journal of the American Academy of Arts and Sciences, Winter, 1977.

Devolution of Holism and the Limits of Reductionism

"Reductionism is the attempt to explain complex phenomena by defining the functional properties of the individual components that compose multicomponent systems: "naïve reductionism," the belief that reductionism alone can lead to a complete understanding of living organisms, is not tenable. Organisms are clearly much more than the sum of their parts, and the behaviour of complex physiological processes cannot be understood simply by knowing how the parts work in isolation." - *in "The End of "Naïve Reductionism": rise of Systems Biology or Renaissance of Physiology?", American Journal of Physiology-Cell Physiology, 2005.*

The Concepts of Health and Healing Are Not Discussed In Medical Schools

"By concentrating on smaller and smaller fragments of the body, modern medicine often loses sight of the patient as a human being, and by reducing health to mechanical functioning, it is no longer able to deal with the phenomenon of healing. This is perhaps the most serious shortcoming of the biomedical approach. Healing, the Phenomenon Is Considered Outside the Scientific Framework; the term "healer" is viewed with suspicion, and The Concepts of Health and Healing are generally Not Discussed In Medical Schools. The reason for the exclusion of the phenomenon of healing from biomedical science is evident. It is a phenomenon that cannot be understood in reductionist terms. This applies to the healing of wounds, and even more to the healing of illnesses, which generally involve a complex interplay among the physical, psychological, social, and environmental aspects of the human condition.

Health and the phenomenon of healing have meant different things in different ages. The concept of health, like the concept of life, cannot be defined precisely, and in fact, the two are closely related. What is meant by health depends on one's view of the living organism and its relation to its environment. As this view changes from one culture to another, and from one era to another, the notions of health also change.

The broad concept of health that will be needed for our cultural transformation (a concept that includes individual, social, and ecological dimensions), will require a systems view of living organisms and, correspondingly, a systems view of health. Most 19th century public health reformers did not believe in the germ theory of disease but assumed that bad health originated from poverty, malnutrition, and filth, and they organized vigorous public health campaigns to combat these conditions.

This led to improvements in personal Hygiene, Nutrition and to the introduction of new Sanitary Measures: Purification of Water, efficient disposal of Sewage, provision of safe milk, and improved Food Hygiene; All Extremely Efficient in Controlling Diseases. The mechanistic perspective of life has influenced physician attitudes regarding health and illness. **We can only transcend the biomedical model if we are prepared to adjust other aspects of our health for a social and cultural shift.**

Systems theory looks at the world in terms of the interrelatedness and interdependence of all phenomenon, and in this framework an integrated whole whose properties cannot be reduced to those of its parts is called a system.

The conclusion to be drawn from these studies of the relation between medicine and health seems to be that biomedical interventions (although extremely helpful in individual emergencies), **have very little effect on the health of entire populations. The health of human beings is predominantly determined Not By Medical Intervention but by their Behaviour, their Food, and the Nature of their Environment.**

Since these variables differ from culture to culture, each culture has its own characteristic illnesses, and as food, behaviour, and environmental situations gradually change, so do the patterns of disease.

Medical Practice, based on such a limited approach, Is Not very Effective in promoting and maintaining good health. In fact its practices now quite often came suffering and disease, according to some critics even more than they cure.

The question "What Is Health?" is generally not even addressed in medical schools, nor is there any discussion of healthy attitudes and life styles.

The public image of the human organism (enforced by the content of television programs, and especially by advertising), is that of a machine which is prone to constant failure unless supervised by doctors and treated with medication. The notion of the organism's inherent healing power and tendency to stay healthy is not communicated, and trust in one's own organism is not promoted.

Nor is the relation between health and living habits emphasized; we are encouraged to assume that doctors can fix anything, irrespective of our life styles.

It is intriguing and quite ironic that physicians themselves are the ones who suffer most from the mechanistic view of health by disregarding stressful circumstances in their lives.

Medical schools, especially in the United States, are by far the most competitive of all professional schools. Like the business world, they present high competitiveness as a virtue and emphasize an "aggressive approach" to patient care. **In fact the aggressive stance of medical care is often so extreme that the metaphors used to describe illness and therapy arc taken from the language of warfare. For example, a malignant tumour is said to "invade" the body, radiation therapy "bombards" the tissues to "kill" the cancer cells, and chemotherapy is often likened to chemical warfare.**

Thus medical education and practice perpetuate the attitudes and behaviour patterns of a value system that plays a significant role in causing many of the diseases medicine seeks to cure. Medical schools not only generate stress but also neglect to teach their students how to cope with it. The internal plasticity and flexibility of living systems, whose functioning is controlled by dynamic relations rather than rigid mechanical structures, gives rise to a number of characteristic properties that can be seen as different aspects of the same dynamic principle; the principle of self-organization. A living organism is a self-organizing system.

"Airs, Waters and Places", one of the Most Significant Books of the Hippocratic Corpus, represents what we would now call a Treatise on Human Ecology. It shows in great detail how: The Well-being of Individuals Is Influenced by environmental factors; the quality of air, water, and food, the topography of the land, general living habits.

The correlation between sudden changes in these factors and the appearance of disease is emphasized, and the understanding of environmental effects is seen as the essential basis of the physician's art.

This aspect of Hippocratic medicine has been severely neglected with the rise of Cartesian science and is only now being appreciated again.

As far as Healing was concerned, Hippocrates Recognized the Healing Forces Inherent in Living Organisms, Forces he Called: "Nature's Healing Power."

The Role of the Physician: Is To Assist These Natural Forces by Creating the Most Favourable Conditions for the Healing Process.

This is the original meaning of the word "Therapy," which comes from the Greek "Therapeuin" (To Attend).

In addition to defining the Role of the Therapist; as that of An Attendant, or Assistant, to the Natural Healing Process, the Hippocratic writings also contain a strict code of medical ethics, known as the Hippocratic Oath. **The Hippocratic Tradition, with its emphasis on the Fundamental Interrelation of Body, Mind, and Environment**, represents a high point of Western medical philosophy that is as strong in its appeal for our time as it was 2,500 years ago. **A Key Concept in the view of Health Is That of Balance. The classics state that Diseases Become Manifest When the Body Gets Out of Balance.**

The Causes for such Imbalances are Multiple:

Through poor Diet, lack of sleep, lack of exercise, or by being in a state of disharmony with one's family or society, the body can lose its balance, and it is at times like this that illnesses occur.

Among the external causes, seasonal changes arc given special attention and their influences on the body are described in great detail.

Internal causes are attributed to an imbalance of one's emotional states, which are classified and associated with specific internal organs according to the correspondence system. Illness is not thought of as an intruding agent but as due to a pattern of causes leading to disharmony and imbalance.

However, the nature of all things, including the human organism, is such that there is a natural tendency to return to a dynamic state of balance.

Going in and out of balance is seen as a natural process that happens constantly throughout the life cycle. Accordingly, the traditional texts draw no sharp line between health and illness.

Both health and ill health, are seen as natural, and as Being Part of a Continuum. They are aspects of the same process in which the individual organism changes continually in relation to the changing environment.

For the past 300 years our culture has been dominated by the view of the human body as a machine, to be analysed in terms of its parts.

The mind is separated from the body, disease is seen as a malfunctioning of biological mechanisms, and health is defined as the absence of disease.

This view is now slowly being eclipsed by a **Holistic and Ecological Conception of the world which sees the universe not as a machine but rather as a living system, a view that emphasizes the essential interrelatedness and Interdependence Of All Phenomena, and tries to understand nature not only in terms of fundamental structures, but in terms of Underlying Dynamic Processes.**

It would seem that the systems view of living organisms can provide the ideal basis for a new approach to health and health care that is fully consistent with the new paradigm and is rooted in our cultural heritage. The systems view of health is profoundly ecological and thus in harmony with the Hippocratic tradition which lies at the roots of Western medicine. It is a view based on scientific notions and expressed in terms of concepts and symbols which are part of our everyday language. **At the same time the new framework naturally takes into account the spiritual dimensions of health and is thus in harmony with the views of many spiritual traditions.** Systems thinking is process thinking, and hence the systems view sees health in terms of an ongoing process. **Health as a state of perfect well-being. Health is really a multidimensional phenomenon involving interdependent physical, psychological, and social aspects. The common representation of health and illness as opposite ends of a one-dimensional continuum is quite misleading."** - Dr Fritjof Capra, PhD, University of Vienna, has done research in High-Energy Physics at several European and American universities, in "The Turning Point: Science, Society and the Rising Culture", 1982.

The Medical Trade Invaded The Courts

"When Medicine Recently Outgrew its Liberal Restraints, it Invaded Legislation by Establishing Public Norms. Physicians had always determined what constitutes disease; dominant medicine now determines what diseases society shall not tolerate. **Medicine Invaded The Courts.**

Physicians had always diagnosed who is sick; dominant medicine, however, brands those who must be treated.

Liberal practitioners prescribed a cure: dominant medicine has public power of correction; it decides what shall be done with or to the sick.

In a democracy, the power to make laws, execute them and achieve public justice must derive from the citizens themselves. But the professionals have taken over citizen control over key powers now restricted, weakened and sometimes abolished by the rise of these church-like professions. Government by a congress that bases its decisions on expert opinions given by professions might be government for, but never by the people. This is not the place to investigate the intent with which political rule was thus weakened; it is sufficient to indicate this subversion and to pinpoint its effects.

Citizen liberties are grounded on the rule that hearsay is excluded from testimony on which public decisions are based. What people can see for themselves and interpret themselves is the common ground for binding rules. Opinions, beliefs, inferences or persuasions must not stand when in conflict with the eyewitness-ever.

Expert elites became dominant professions only by reversing this rule.

In the legislature and in the courts, the rule against hearsay evidence was suspended in favour of opinions proffered by members of self-accredited elites.

But let us not confuse the public use of expert factual knowledge with a profession's corporate exercise of normative judgement such as a gunmaker, was called into court as an expert to reveal to the jury the secrets of his trade, he apprenticed on the spot the jury to his craft. He demonstrated visibly his limited and circumscribed expertise and enabled the jury to decide for themselves from which barrel the bullet might have come. **Today, most experts play a different role. The dominant professional provides jury or legislature with his own and fellow-initiates global opinion, rather than with factual self-limiting evidence and specific skill. Armed with an aura of divine authority, he calls for a suspension of the hearsay rule and inevitably undermines the rule of law.**

Thus, one sees how democratic power is subverted by an unquestioned assumption of an all-embracing professionalism." - Ivan Illich, in "Disabling Professions", 1977.

The Court Held That There Could be No State System of Healing

"In the case of State v Biggs (46 SE Reporter 401, 1903) the North Carolina Supreme Court dealt with a Person who was: Advising People as to Diet, and administering Massage, Baths, and Physical Culture (system based on gymnastics, with the focus on maintaining the person health and well-being) .

That Court held that there could be no "State System of Healing":

> ***"The constitutionality of this last act has been vigorously assailed in the courts, on the ground that every one had an "inalienable right to life, liberty and the pursuit of happiness"**, as our great Declaration phrases it, and that by that guaranty it is the right of every one to earn his livelihood by pursuing any calling or vocation not unlawful, and that to place his liberty to do so within the power of a committee chosen by those already pursuing any given calling would be to infringe upon **Section 7 of Article 1 of our State Constitution, Which Forbids Exclusive Privileges and Emoluments to Any Set of Men, and section 31 of the same article, which prohibits "Monopolies and Perpetuities".***
> *Of late years there has been added the argument that such act is also obnoxious to the 14th amendment to the Constitution of the United States, which prohibits any state "**to deny to any person the equal protection of the law."** There was undeniably great force in the argument on that side. The lawmaking power slowly, in this state and in others, yielded to the view that it could or should pass such act. In 1858-59 (Acts1858-59, p 356, c. 258) it first incorporated "The State Medical Society", and authorized the above examination, and prohibited any one to practice medicine or surgery or prescribe for the cure of diseases, for fee or reward, without such license, but was careful to add a proviso that no one who should practice without such license should be guilty of a misdemeanor, the only penalty being that if he practiced on credit he could not recover his fees in the courts. The law remained thus till the above recited act passed in 1885, and which was made prospective.*

The constitutionality of this last statute was fully considered, and after a most able argument against it by counsel was sustained by this court, but not without great hesitation, and upon the ground solely that the act was *"an exercise of the police power for the protection of the public against incompetents and impostors,* ***and in no sense the creation of a monopoly or special privilege."*** *State v. Call,121 N.C. 646, 28 S.E. 517.*

If the object of the act could be construed as intended to give special and exclusive privileges to a special body of men, and not solely and in truth for the protection of the public, the Legislature was prohibited by the Constitution from enacting it, nor could the Legislature restrict the cure of the body to the practice of "medicine and surgery", or establish any state system of healing. *State v. McKnight,131 N.C. 723, 42 S.E. 580, 59 L. R. A. 187.* ***After these decisions, moderation and wisdom would have suggested that the matter rest. Those who wish to be treated by practitioners of medicine and surgery had the guaranty that such practitioners had been duly examined and found competent by a board of gentlemen eminent in that high and honourable profession, and those who had faith in treatment by methods not included in the "practice of medicine and surgery", as usually understood, had reserved to them the right to practice their faith and be treated, if they chose, by those who openly and avowedly did not use either surgery or drugs in the treatment of diseases. The courts have declared that they possessed this right, and that the Legislature could not, under the Constitution, restrict all healing to any one school of thought or practice.*** *What is "the practice of medicine and surgery" is as well understood, and its limits, as the practice of dentistry.*

The courts have also held that of the many schools of "medicine and surgery" the Legislature could not prescribe that any one was Orthodox and the others Heterodox, but that those professing the different systems: "Allopathic", "Homeopathic", "Thompsonian", and the like; should be examined upon a course such as is taught in the best colleges of that school of practice, but that it is not essential that a member of each, or of any special school, should be upon the Board of Examiners." *- in "STATE v. BIGGS", 46 S.E. 401, 133 N.C. 729, Supreme Court of North Carolina, 18 December 1903.*

State Medicine Leads To Compulsion And Government Control

The Saskatchewan Doctors Strike of 1962:
"Saskatchewan's 930 doctors are unalterably opposed to the introduction of a Government Controlled Compulsory Prepaid Medical Care Plan, or in plain language; State Medicine. Our main reasons for opposition are based on 2 factors:

1. Compulsion.
2. Government Control.

We are convinced that these factors would be responsible for lowering of the standards of Medical Care for our patients.
Our position may be defined as unalterable." *- in "Debates and Proceedings", Legislative Assembly of Saskatchewan, Canada, 25 October 1961.*

"Unless we put Medical Freedom into the Constitution, The Time Will Come when Medicine Will Organise Into An Undercover Dictatorship, and force people who wish doctors and treatment of their own choice to submit to only what the dictating outfit offers. Laws restricting the practice of the Healing Art to One Class of Physicians and Denying Equal Privileges to Others, constitutes the Bastilles of Medicine, for they Prevent Progress." *- in "National Board of Health. The Other Side of the Question, As It Appears to Thomas Morgan", Youngstown Vindicator, 27 January 1911.*

Medicine Not An Exact Science

"Medicine is an Experimental, Not An Exact Science.
All the law can do is to regulate and safeguard the use of powerful and dangerous remedies, like the knife and drugs, but it cannot forbid dispensing with them. **When the Master, who was himself called the Good Physician, was told that other than his followers were casting out devils and curing diseases, he said; "Forbid them not."** page 405.". - Dr Jerry L. Tennant MD, in "Healing is Voltage: The Handbook", 2014.

"The best and greatest gift in this earthly life is not wealth, but health!" *- Bruno Groning*

"Take heed unto thyself, and unto the doctrine; continue in them: for in doing this thou shalt both save thyself, and them that hear thee." *- 1 Timothy 4:16*

The Medical Trade Cannot Teach That Which They Don't Know

Every Emunctologist should be aware that:

"No one can teach what they don't known."

Thus: The Emunctologist should be Fully "Vaccinated" Against All Nonsensical Stupidity; that is Permanently and Continuously, being Produced by Something Called "Medical Science".

These So-Called "Medical Science": Is A Nefarious Pseudoscience

For indeed, this so-called "Medical Science"; Is Indeed A Nefarious Pseudoscience.

Nefarious to whom?

To both Human, and Animal Life.

But more so; to Animal Life.

For Animals, cannot defence themselves from the Nefarious Medical Trade so-called "Medical Science"

There Will Be Justice When Those Who Are Not Injured Are As Outraged As Those Who Are

"That city; In which Those Who Are Not Wronged,
No Less Than Those Who Are Wronged,
Exert Themselves To Punish The Wrongdoers." *- Plutarch in "The Life of Solon",*
The Parallel Lives, tr. B Perrin

Take Head Beware of the Medical Trade

For they will Lie, and try convince the uneducated to believe their Lies, and into believing in the absurdity of their methods. This will be done, has as been done in the past, so it shall be done in the future; the Medical Trade will Lie by fabricating Falsehoods; in the attempt to scare the uneducated into the acceptance of their Deranged Methods of Poisoning, Disease and Death.

Why The Medical Trade Is A Threat To Public Health

“Most patients will derive No Health Improvement from Medication.

We should tackle the root causes of disease instead.

Contrary to popular belief, the cost of an ageing population in itself is not a threat to the welfare system; an unhealthy ageing population is.

Rather than address **the root cause of these conditions through lifestyle changes,** we prioritise Drugs, most of whom will derive no health outcome improvement.

The reality is that lifestyle changes not only reduce the risk of future disease, their positive effects on quality of life happen within days to weeks.

However, those patients unlucky enough to **Suffer Side Effects From Prescribed Medicines may find their quality of life Will Deteriorate.** A former airline pilot came to see me last year to seek reassurance that it was OK to participate in an Ironman event, having **Stopped All Medications** 18 months after suffering a heart attack. He had made an informed decision to Stop the Medication after suffering side effects, and instead had **Opted for a Diet and Lifestyle approach to manage his heart disease.**

A few weeks ago, 4 years after his heart attack and 2 years after **Coming Off All Medications, and Dramatically Changing His Diet, Tony completed his first Ironman at the age of 58, revealing It’s Never Too Late To Improve Fitness.**

But the most important message remains clear: **You Can’t Drug People Into Being Healthier.”** - Dr Aseem Malhotra, MD, in “Why Modern Medicine is a Major Threat to Public Health”, The Guardian, 30 August 2018.

Cough Medication Is Unnecessary And Useless

__“Most coughs clear up within 3 weeks and Don’t Need Any Treatment.”__ - in “Cough”, NHS inform, 5 February 2019.

__“Over the Counter Cough Medicines for Acute Cough Cannot Be Recommended__ because there is no good evidence for their effectiveness. __We tried to obtain information on unpublished studies from study authors and Pharmaceutical Companies but obtained a limited response.”__ - in “Systematic review of randomised controlled trials of over the counter cough medicines for acute cough in adults”, BMJ, 9 February 2002.

__“Over the Counter Medicines may be an Unnecessary Expense.”__ - in __“Cough Medicines Are Unnecessary”,__ BMJ, 9 February 2002.

Cough Medication Carries More Risks Than Benefits

"There are various cough syrups for treating coughs.

> ***"They Are Absolutely Useless. Coughing is a bodily defence mechanism designed to keep the airways clear, and there is no need to treat it with our products."*** *- Dr Borja García de Bikuña, Pharmacist, Member of FarmaCiencia, Author of "Complex Pharmaceutical Specialities", 2004; "Complex Medications", 2008.*

Paediatricians Recommend Avoiding Medication

There is No scientific Evidence regarding the efficacy of these Medications; the FarmaCiencia Association asserts that some Carry More Risks Than Benefits.

A Common Cold Cough Resolves On Its Own over time; if it becomes bothersome for the child, Some **Paediatricians Recommend Avoiding Medication."** - in "Use of cough syrups discouraged due to lack of evidence of efficacy," laSexta Noticias, 11 February 2019.

We Suggest Against the Use of Over the Counter Cough and Cold Medicines

"In 2015, the average American household made 26 trips to retail outlets, and spent approximately $338 Annually, on Over The Counter Syrup (58%) or a Throat Lozenge (53%) **Total sales of Over The Counter Cough, Cold, and Allergy Products was $9.56 Billion in the United States in 2015.**

For adult and pediatric patients with cough due to the common cold, **We Suggest Against the use of Over the Counter Cough and Cold Medicines** until they have been shown to make cough less severe or resolve sooner.

1. In adult and pediatric patients with the common cold, W**e Find No Evidence to support or refute the use of Over The Counter Antitussive Agents, Expectorants, Mucolytic Agents, Antihistamines, or combination products for reducing cough.**

2. In adult patients with cough due to the common cold; **We Suggest Against the use of Nonsteroidal Anti-Inflammatory Agents (NSAIDs: Ibuprofen, Naproxen, Aspirin)** until they have been shown to make cough less severe or resolve sooner.

3. In pediatric patients (2-18 years) with cough due to the common cold, we suggest Honey may offer more relief for cough symptoms than no treatment.

Remarks: Infants <1 year of age should not be administered Honey. And children <2 years of age should not be administered Dextromethorphan for cough symptoms.

4. In pediatric patients (aged < 18 years) with cough due to the common cold, we suggest avoiding use of Codeine-containing Medications because of the **Potential for Serious Side Effects including Respiratory Distress."** - in "Pharmacologic and Nonpharmacologic Treatment for Acute Cough Associated With the Common Cold", Chest Expert Panel Report, 2 August 2017.

Suppressing Cough Can Lead To Pneumonia

"1. Coughing is a defence mechanism of the respiratory system. It serves to clear away secretions and foreign bodies, keeping the airways clean and open. 2. The most common cause of acute cough is upper respiratory tract infections (common colds). Colds, they resolve on their own, Without Medication, within 1 or 2 weeks.

3. Acute Coughs Should Not Be Treated With: Cough Suppressants, Mucolytics, Expectorants, Antihistamines, or Nasal Decongestants, especially in children under 6 years of age. There is No Evidence that these Medications are effective for treating coughs in children, and the Risks Outweigh Any Potential Benefits.

4. Suppressing the Cough would lead to:

I. Increased Mucus Retention.
II. Reduced Oxygenation.
III. Greater Airway Obstruction.
IV. Increase the Risk of Ear Infections (Otitis).
V. Increase the Risk of Pneumonia.

5. Antibiotics are ineffective for treating colds and are contraindicated.

6. It is very important to keep a child with a cold well-hydrated. They should be given fluids frequently.

7. Nasal irrigation and humidifying the air are recommended." - in "Decalogo de la tos", AEPap. Spanish Association of Primary Care Pediatrics, 2011.

Coughing Is Also a Side Effect of Pharmaceuticals

“Coughing is also a Side Effect of Several Drugs, most notably Angiotensin-Converting Enzyme (ACE) inhibitors such as Lisinopril and Enalapril, which are mainstays in the treatment of high blood pressure and heart failure.

The ACE inhibitor **Cough sometimes begins months after you start taking the Drug.**” - in “No coughing matter: Cough experts say many over-the-counter **Cough Medications probably aren't worth the money”**, Harvard Health Publishing, 17 April 2026.

Chapter 42

How The Medical, Dental & Veterinary Trade, Are Destroying; Human And Animal Lives in the Relentless Pursue Financial Profit

“I asked a Scientist: **How do you induce an allergy** in a rat?, he said:

> ***“You take Aluminum Adjuvant and Inject it into a rat with a protein. If it’s a peanut protein, that rat will have a lifetime allergy to peanuts. If it’s a dairy protein, you’ll have a lifetime allergy to dairy. If it’s a latex protein, you’ll have a lifetime allergy to latex.”***

That’s the same Aluminum Adjuvant that’s in the Hepatitis B Vaccine, and many of those Vaccines contain peanut oil excipients.

We need to look at the Aluminum in the Vaccines, and we're doing that today at NIH to see if that has anything to do with this explosion of allergies that began in 1989, which was the year they expanded the Vaccine schedule.

It's not only what's the Shot when you give the Injection, it's also what's in the ambient environment at the time! So, if there is a Timothy Weed outbreak at the time you get that Injection, ou can have a lifetime allergy to wheat.” - Robert F. Kennedy, Health and Human Services Secretary, United States, 24 October 2025.

Gardasil: A Vaccine in Search of a Disease

“The Pharmaceutical Industry will tell the Public that:

1. “Vaccines are Safe.”
2. “Vaccines are Effective.”
3. “Vaccines Save Lives.”

Marketing Illnesses to Promote Pharmacological Solutions

Today’s Society has **come to view many Problems as Medical Disorders, Whereby “Medical Interventions” are “The Only Appropriate Solution”,** and thus the coining of the term Medicalization. **The “Engines of Medicalization”, are “The Pharmaceutical Industry and Market Interests which are Driving the Conceptualization of Disease by Marketing Illnesses to Promote Pharmacological Solutions”,** [Conrad, P., “The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders”, 2008].

By utilizing the Technique of Medicalization, we are now able to legitimize social problems with the added benefit of providing a Medical and/or a Pharmacological Solution, Resulting in a "Proliferation, and Expansion of Medical and Diagnostic Categories."

Examples of Such Expansion:

1. **Attention Deficit Hyperactivity Disorder** (ADHD).
2. **Erectile Dysfunction** [Conrad, P., 2008].
3. **Childbirth** [Rothman, B.K., "Recreating Motherhood", 2000].
4. **Menopause** ["Sociological Perspectives on the Medicalization of Menopause", Annals of the New York Academy of Sciences, 1990].
5. **Depression** ["Physicians' Constructions of Depression: Inside/Outside the Boundaries of Medicalization", Health, 2004].

Many now view the Process of Medicalization as Negative, calling it Repressive, and Coercive, Arguing for the De-Medicalization of Various "Medical" problems ["Foucault and the Medicalisation Critique", Health and Medicine, 1997].

Selling Sickness: The Pharmaceutical Industry & Disease Mongering

"Disease Mongering" among Pharmaceutical Companies to Increase Profits have become more widespread ["Selling Sickness: The Pharmaceutical Industry and Disease Mongering", British Medical Journal, 2002].

Many Diseases are Increasingly Defined in Relation to the Drugs to which it responds ["Pharmaceutical Reason: Knowledge and Value in Global Psychiatry", Cambridge University Press, 2006], because **increased use of Pharmaceuticals for purposes that Are Not Strictly Medical,** the more appropriate term should be **Pharmaceuticalization** ["The Sociology of Pharmaceuticals: Progress and Prospects, Sociology of Health & Illness", 2008]. In recent years there has been a shift in the characterization of risk factors to that of disease, with Pharmaceuticals not only used to treat, but now possibly prevent disease ["Prescribing by Numbers: Drugs and the Definition of Disease", Johns Hopkins University Press, 2006]. **The Major Beneficiary of this new "protodisease", or predisease model has been the Pharmaceutical Industry** who now **rely on it as a Major Profit Source** ["The Politics of Life Itself: Biomedicine, Power and Subjectivity in the Twenty-First Century", Princeton University Press, 2006]. **"Drug Companies obviously make Drugs, but less obviously, they make Views of Illness"** ["Pharmageddon", University of California Press, 2012]. **In This New Environment, the Role of Vaccines has Increasingly Changed in the new Pharmaceuticalized environment from limiting infectious disease to treating non-infectious diseases: Various Cancers; Type I Diabetes; Gastroesophageal Reflux Disease; Alzheimer's Disease; Cocaine Abuse; Cigarette Smoking, Etc.**

It Was In This Environment that Gardasil Was Created, and Launched with a Media Campaign; known as the "One Less" Campaign where it was spun as both, "A Drug Against Risk" and a Vaccine. "To Mandate a Vaccine as a Condition of Attending School" ["Gardasil: A Vaccine against Cancer and a Drug to Reduce Risk", Chapter 2, Three Shots at Prevention: The HPV Vaccine and the Politics of Medicine's Simple Solutions, Johns Hopkins University Press, 2010].

The Risks of the Vaccine

What About the Risks from Gardasil? Serious Adverse Events From a Vaccine is defined by the FDA as those which **"result in death, life threatening conditions, hospitalization, disability or permanent damage, birth defects, or require medical or surgical measures to prevent permanent damage"** ["What Is a Serious Adverse Event?", FDA, 2013]. As even most pro-vaccine experts will admit **almost All Medical Interventions carry some Degree of Risk that could Cause a Serious Adverse Event**, including Gardasil. But what is the frequency of these events? so the question is not whether Gardasil has the potential to cause Serious Adverse Event but the frequency with which this occurs, information that is not always revealed to parents.

As of 2015 Serious Adverse Events following Gardasil Vaccination that have been reported in the medical literature include:

1. **Premature Ovarian Failure** ["Premature Ovarian Failure 3 Years after Menarche in a 16-Year-Old Girl Following Human Papillomavirus Vaccination", Case Reports, British Medical Journal, 2012];

2. **Guillian Barre Syndrome, Lupus, and a Host of Other Autoimmune Related Diseases** ["Human Papillomavirus Vaccine and Systemic Lupus Erythematosus", Clinical Rheumatology, 2013];

3. **Erythema Multiform, and Other Dermatological Disorders** ["The Quadrivalent Human Papillomavirus Vaccine: Erythema Multiforme and Cutaneous Side Effects after Administration", Dermatology, 2010];

4. **Nervous System Disorders such as Postural Orthostatic Tachycardia Syndrome (POTS), and Many Others** ["Human Papillomavirus (HPV) Vaccines as an Option for Preventing Cervical Malignancies: (How) Effective and Safe?", Current Pharmaceutical Design, 2013];

5. **Death** ["Death after Quadrivalent Human Papillomavirus (HPV) Vaccination: Causal or Coincidental", Pharmaceutical Regulatory Affairs Journals, 2012].

Most of These Events Are Dismissed by Pharmaceutical Company "Experts"

as "coincidental", occurring no more often then they might have with a placebo.

Gardasil's safety record; as presented by Merck to the FDA clearly showed its safety was not only as safe as a placebo but safer. It's here that the waters begin to get a bit murky. Like most studies that involve Vaccines the placebo used in the Gardasil trials contained an **Aluminum based Adjuvant "Amorphous Aluminum Hydroxy Phosphate Sulfate" (AAHS).** Adjuvants such as AAHS are routinely added to Vaccines ["Aluminum Vaccine Adjuvants: Are They Safe?", Current Medicinal Chemistry, 2011]. While the FDA has stated that up to 850 µg/dose of AAHS is safe, **this is arbitrary and not based on safety evaluations.**

Aluminum in Vaccines

Aluminum Has Been Linked to a Number of Disorders of the Nervous System Gastrointestinal Tract, including but not limited to:

1. Multiple Sclerosis.

2. Crohn's Disease ["Aluminum as an Adjuvant in Crohn's Disease Induction", Lupus, 2012].

3. Gulf War Syndrome.

4. Alzheimer's Disease ["A Molecular Mechanism of Aluminum-Induced Alzheimer's Disease?", Journal of Inorganic Biochemistry, 1999].

5. Autism, and Amyotrophic Lateral Sclerosis ["Aluminum Hydroxide Injections Lead to Motor Deficits and Motor Neuron Degeneration", Journal of Inorganic Biochemistry, 2009].

So, **without the use of a true placebo can the true safety of Gardasil be evaluated?"** - in **"Gardasil: A Vaccine in Search of a Disease?", How Silencing of Dissent in Science Impacts Woman.** The Gardasil Story, Advances in Sexual Medicine, October 2017.

Died 3 Hours After Vaccination

> ***"The Placer County Sheriff's Office announced Saturday that a person Died Hours after Getting the Vaccine. "20 minutes later he realized his legs felt tingly and he was having shortness of breath. He was wheeled out in an ambulance, 1 hour later he was in ICU on a ventilator, 3 hours later he passed away." Now, there are questions from the community on the safety of the vaccine. An Auburn woman says she witnessed the tragedy first hand."*** *- in* ***"Woman Warns She Saw Grandfather's Aid Die After Covid Vaccine"****, CBS News, 25 January 2021.*

We Are All Being Harmed by Vaccinations

"This evidence must be circulated broadly in light of the imminent Fall, 2009 plan to turn North American Schools into Mass Vaccine Centers; to institute Triple Flu Vaccine to All. Children will be the first to be injected with Experimental Flu Vaccines. The entire Vaccine Industry, as it turns out, has been experimental. The same thing will happen; as has been happening with all Vaccines. Clinically Silent Ischemic Brain, and Body Damages will happen.

All Vaccines are causing immediate and delayed, acute and chronic, waxing and waning, impairments to blood flow, throughout the brain and body. This is causing us all to become chronically ill, sick, and causing brain damages along a continuum of clinically silent to death. This is causing ischemic "strokes".

In some respects, this is also "aging." Since the damages are microscopic, we cannot see them as they occur.

We can now see the neurological aftermath of these damages; within hours, and days of Vaccination.

> ***"And I heard another voice from heaven, saying, Come out of her, my people, that ye be not partakers of her sins, and that ye receive not of her plagues."*** *- Revelation 18:4*

All Vaccinations Are Causing Chronic Illness, And Mass Disorders; on mass scales. The global health consequences clearly amount to plaques. Science is only a man made truth-seeking tool. It is fallible. It is a statistical, probabilistic mathematical model. It has limitations. Wielded for profit, truth becomes lost.

Scientific methods, design, and analyses can; just as soon; hide the truth as they can discover truth, or create "truth" de-novo (a-new).

Science cannot replace God given tools of common sense and observation we all have. You do not need statistical probabilistic mathematical models, wielded by experts, to deny what you can see with your very own eyes.

All Vaccines have been causing "burns" to body and brain. The brain has no pain receptors. You will not feel the pain. You can, however, see the footprints of these "burns" immediate and delayed, from each Vaccination. Are emerging, after each vaccination. The "burns" are largely to internal organ systems. We can All now see the damaging effects of these "burns" with our own eyes.

1. As a physician, it is my sworn duty to cause no harm.

2. As a Human being, it is my duty to watch over my fellow beings.

3. As an Educator, it is my responsibility to teach awareness and understanding.

4. As a Scientist, it is my duty to separate cause from coincidence.

5. As a Christian, it is my value to do unto others, as I would have others do unto myself.

6. As a Man, it is my responsibility to stand up to power, with truth and understanding, when those that wield power are in error.

All Vaccinations cause Brain Damage, Disease, Chronic Illness, Aging, and Death "res veritas loquitur" the truth speaks for itself.

It is not so much the specific "Germs and Toxins" that are causing death and disease.

It is the response of the body and blood to foreign substances entering the blood and tissues that causes pathology.

The state of the blood, the nature of the triggers, the state of the immune system relative to repeat antigenic challenges, conspires to effect damages along a continuum of harm; all organ systems can be affected.

The cellular, and tissue damages are additive with each exposure.

Direct Vaccination is no longer necessary to be Vaccine Injured.

Vaccinations are not the only trigger to pathology.

Serial (repeat) Vaccinations aggravate the core problems.

Once the blood vessels are damaged, to a critical point, the pathological process can take on a self-perpetuating life of its own.

Features that you can see, include:

1. The eye turning in.
2. The eye turning out.
3. The smile becoming asymmetrical.
4. The eye blinks coming out of sync.

These are Strokes, from Ischemia, throughout the brain and body, for all.

Repeat Vaccination Is The Primary Culprit.

However, Vaccination is not the only cause of this problem in human physiology.

Anoxia Spectrum Syndromes

Anoxia is the total Depletion of Oxygen supply to body tissues or organs, with cerebral anoxia (brain) being the most critical, often causing permanent damage. Vascular areas that causes congestion, impaired blood flow, lack of Oxygen, glucose and nutrients to the affected tissue areas. Without Oxygen or Nutrients, the cells lining the walls of capillaries self-cauterize (clamp shut).

This is a healing mechanism that must be instituted in order to prevent leakage of plasma and or blood into tissues.

With Anoxia Spectrum Syndromes Impairs Blood Flow, and Oxygenation to the tiny blood vessels in the eye, we sometimes see "retinal hemorrhages."

When Anoxia Spectrum Syndromes occurs in the brain, we call it "Intracerebral Bleeding." When Anoxia Spectrum Syndromes occurs to the bones, we call it "Brittle Bones." When the blood sludging Anoxia Spectrum Syndromes process happens to brainstem areas controlling automatic respiration, the central drive for respiration is lost.

When Anoxia Spectrum Syndromes happens to the descending motor tracts in the brain, we call this Paralysis, Guillain-Barre Syndrome, Infantile Paralysis, Seizures, Encephalopathy.

Acute Disseminated Encephalomyelitis (ADEM), immune-mediated Inflammatory Disorder affecting the central nervous system that causes damage to myelin; rapid demyelination in the brain and spinal cord. ADEM is a potential adverse event following Vaccines, including the; Measles, Mumps and Rubella (MMR) Vaccine.

> *"The Court found that Bailey's Acute Disseminated Encephalomyelitis (ADEM) was both caused-in-fact and proximately caused by his vaccination. It is well-understood that the vaccination at issue can cause ADEM, and the Court found, based upon a full reading and hearing of the pertinent facts in this case, that it did actually cause the ADEM. Furthermore, Bailey's ADEM was severe enough to cause lasting, residual damage, and retarded his developmental progress, which fits under the generalized heading of Pervasive Developmental Delay, or PDD [an autism spectrum disorder]. The Court found that Bailey would not have suffered this delay but for the administration of the Measles, Mumps and Rubella (MMR) Vaccine, and that this chain of causation was; a proximate sequence of cause and effect leading inexorably from vaccination to Pervasive Developmental Delay." - in the case of Bailey Banks ruling by Special Master Richard B. Abell, United States Court of Federal Claims, June 2007.*

Vaccines Can Cause Brain Damage

"Occasionally, Vaccines cause injury or death. Patients are left with what's known as "encephalopathy" (brain damage).

In fact, nearly 1,300 cases in which Vaccine-Related Brain Damage has been compensated in court over the past 20 years. Many experts don't dispute that Vaccines Can Cause Brain Damage. Family to Receive $1.5 Million in First-Ever Vaccine-Autism Court Award.

Our examination of federal Vaccine court decisions over the years reflects this.

Children who end up with Autistic Symptoms, or Autism have won Vaccine injury claims over the years-as long as they highlighted general, widely-accepted Brain Damage; not Autism specifically.

But when Autism, or Autistic symptoms are alleged as the primary Brain Damage, the cases are lost. Since the late 1980's, more than 2,100 families have received compensation for Vaccine Injuries under the federal program designed to help in instances of severe Vaccine Side Effects.

And more than half of those awards are for Brain Injuries." - in "Vaccines, Autism and Brain Damage: What's in a Name?", CBS News, 14 September 2010

"All of these children will show the same Ischemic Brain Damages as children who have been rendered Autistic, Learning Disabled, or Dead after Vaccinations.

The process that Causes Brain Damages From Vaccination is also the same Anoxia Spectrum Syndromes process; that Causes all Damages after Vaccination; All Vaccinations. When Anoxia Spectrum Syndromes happens in infants, and children, we call it Autism-Spectrum Disorders, specific Learning Disabilities, Attention Deficit Disorders, Aspergers Syndrome, Global Developmental Delay, and some cases Cancers.

Sometimes Anoxia Spectrum Syndromes; Causes or Compounds Cerebral Palsy; both conditions result from Impaired Oxygenation, and Blood Flow to the Brain.

When Anoxia Spectrum Syndromes happens in teen girls after Gardasil Vaccination, it creates Death, Disease, Illness, Clouded Thinking, and Paralysis.

Remarkably, the Gardasil Vaccines are simply completing the silent Ischemic Vascular Damages, to body and brain that were caused from each childhood vaccination the girl received. Sudden Death can also be due; to loss of central drive for respiration in the same manner that Vaccinations Are Causing many cases of Sudden Infant Death.

Sometimes Seizures may also occur.

When Anoxia Spectrum Syndromes happens in military and armed services personnel, this causes "Gulf war Syndrome."

No Oxygen to Electrically active cells causes depolarization. In the heart, Ischemia (restriction in blood supply to tissues or organs, causing a severe shortage of oxygen needed for cellular metabolism) causes Arrhythmia; a seizure to the heart.

In the Brain, Ischemia Causes Seizures; Arrhythmia to the Brain. Seizures are a symptom of Impaired Blood Flow, and Oxygenation just like Vaccine induced autism-spectrum is a symptom of the same process.

I can make these statements of fact, since the photographs you can see, before and after Vaccination, show we are all having Ischemic Microvascular Strokes; silently.

Some of these damages are called "Bulbar Palsies".

The Ischemic Brain Damages, After Vaccination, from infants to adults, cut across all symptom based medical diagnostic end points.

Anoxia Spectrum Syndromes Is How Vaccinations Are Causing a Multitude of Chronic Illnesses and Disease.

No forward flow translates into no Oxygen or fuel delivery.

For the Brain, and Body, this causes Hypoxia (Low Oxygen), Anoxia (No Oxygen) and Ischemia (Impaired Blood Flow).

In terms of Vaccine Damages, impaired forward blood flow in end vascular territories creates Brain, and Organ Damages in us all.

These Damages have been clinically silent; for millennia.

This Ischemic Process, from Germs, Toxins, to Vaccinations, Is the Cause of Much Disease, Pain, and Suffering.

All Vaccines Are Causing Chronic Disease, in our attempts to prevent acute disease.

When There Is Impaired Blood Flow; There Is Impaired Oxygen delivery to tissue. Vaccines Cause Impaired Blood Flow in an immediate, delayed, waxing and waning pattern.

This Impairs Oxygen delivery throughout the 60,000 miles of microscopic end blood vessel networks in the brain and body.

The evidence you can see, represents the beginning of the end of a Flawed Medical Model And System; that Has Caused the Greatest Harm, by mankind to mankind, in recorded history. Remarkably, we managed to perpetrate these acts under the guise of the greater good, for handsome profit, endorsed by political leaders, corporate merchants, public health officials, and medical professionals alike; they don't know what they don't know; part of the problem.

Debates over the safety, efficacy, and utility of the one-size-fits-all global vaccination programs has reached a fervent pitch. According to the World Health Organization (WHO) there are 43 Million Vaccinations administered globally, on any given day. As citizens, we are told "leave the science to scientists." If you do not have a medical or advanced science degree, your input is "irrelevant."

You are told children can handle 10,000 Vaccinations safely. Medical science has not known what to measure in order to ensure safety; for all. Now that we have the hard, clinically reproducible, see for yourself measures of neurological damages, we can now see that All vaccinations, are causing tissue, organ, and brain damages.

These Damages exist along a continuum of harm.

The damages are additive with each Vaccination received.

The clinically silent adverse effects include derailments of all organ systems, to death.

We call these adversities by a plethora of clinical labels that are seemingly unrelated to the causal event of repeat vaccinations.

Remarkably, I can now make these bold statements as we can all now see, the ischemic brain damages, for us all, across All Vaccinations, from infancy to adulthood, immediately and delayed, irrespective of the end organ damages or clinical diagnostic labels that emerge.

We are selling you Vaccines, for profit, which are causing illnesses and death.

We then sell you symptom based **Pharmaceutical Products, for profit, to treat the damages and disorders we have caused.** I can say that the Vaccine Damages extend to the realm of Cancers; in addition to varied Autoimmune and Neurodevelopment Disorders. Evidence now before the United States federal Circuit Courts on Vaccine Injuries proves that we have All been harmed, and are being harmed, by this universal one-size-fits-all Vaccination program." - Dr Andrew Moulden, MD, in "Vaccinations Are Causing Impaired Blood Flow (Ischemia), Chronic Illness, Disease and Death for Us All", 3 August 2009.

Vaccines And Mini-Strokes

“Researcher Dr Andrew Moulden, MD an expert in Neurobehavioral assessment of Brain and Behavioral Disorders, has made some interesting observations about Vaccines after extensive research.

He found that **Vaccines, across the board, cause Ischemia; restricted or impaired blood flow in microcirculation units.** Vaccines lead to Ischemia, which in turn leads to; Anoxia or Impaired Oxygen delivery to tissues. This, in turn, leads to: Cell Death or “Mini-Strokes.”

When this takes place in the Brain and Nervous System, it leads to; Neurodevelopmental Disorders such as Chronic Fatigue Syndrome, and Learning Disabilities. It could also take place in cells and tissues elsewhere in the body.

This is how **Vaccines produce a variety of symptoms, depending on the damaged area.** When a Vaccine is injected into the blood, 2 things take place:

1. A Non-specific immune hyperstimulation or immune hypersensitivity.
2. An **Electrostatic Instability of blood flow that impairs fluid dynamics and Oxygen / Nutrient delivery throughout the body’s Vascular System.**

Healthy blood flow is the basis of life, healing, cellular function, wellness and health.

One of the processes that takes place is the waxing and waning, and acute, then chronic, changes in blood flow from “fluid” to “gel”. For instance, **aluminum present in Vaccines as an adjuvant causes “sludging” of blood flow.**

This takes place as aluminum causes particles in the blood to agglomerate, giving the blood a sludge-like quality.

The capillaries cannot absorb Oxygen, and Nutrients from “thickened” blood, which leads to cellular and tissue damage.

If this seems “minor”, it is not when taking place at the microscopic level.

Infants who Die Suddenly and “inexplicably” after being Vaccinated; suffer impaired blood flow to end-capillary vessels in the brain stem, which controls the reflex-like respiratory response.

All Individuals who are Vaccinated thus suffer a series of Ischemic Strokes throughout life.

When the body reaches “breaking point”, it results in Neurodevelopmental; and Other Disorders.

Suffice to say that: **A Healthy Immune System and an overall Healthy Lifestyle is the best protection against disease.”** - in **“Vaccine-Nation: Poisoning the Population, One Shot at a Time”,** 2011.

Vitamin K Vaccines

Given by the Medical Trade to Newborn Babies Shortly After Birth

> ***"The Department of Health and The National Institute for Health and Clinical Excellence, recommends that all newborn babies are given a Vitamin K supplement at birth. Your baby will need to receive three doses for this to be effective. Repeat doses will be needed at one week and one month, these will be given by the GP or alternatively the mother can be shown how to give their baby the final dose, by their midwife."*** *- in "Vitamin K – Information for parents", Northern Lincolnshire NHS F. Trust., April 2025.*

"The more I read about Vitamin K Vaccines, the more I can't believe that it's injected into newborn infants. My scientific endeavours have really shown me that by and large, that nature on overall didn't make mistakes like this; that nature didn't leave out Vitamin K from babies; and that until babies are 6 months old; they're not actually having a full coagulation or normal coagulation. So there's a reason just like babies are programmed to be anti-inflammatory, I believe that babies are programmed to not have new numerously higher levels of coagulation than adults. Also if you look at the coagulation supposed deficits that a baby has; it's not just the Vitamin K factors. **People who understand the difference don't give any at all,** and if you do give it maybe would just be if there was an extremely traumatic birth; but **you have to understand some of the things that Medical Interventions do at Birth.** For instance when the baby is born, what happens is it's a very tight passageway, and the baby is squeezed very tightly, at the brain.

The cranium is made so that it can compact, in on itself, the brain is squeezed, there's trauma all throughout the body, about 30% of babies will have Micro hemorrhages from a normal delivery. Afterwards, in most societies, that cord is clamped right away; which is a problem. Because you are leaving behind up to 40% of that baby's blood, that belongs to that baby; but you're also leaving behind Stem Cells; which have the potential to go in and clear up any of the problems that happened in the brain, or elsewhere. Now, if you thicken the blood, then how is that going to affect the ability for those Stem Cells to go where they need to go. When you have these Vitamin K factors, those areas that bleed; tend to clot, and it's a little harder to clear that out, than if you just leave it that way the concern is always the minority. **This Vastly Small Percentage of Children** who can develop an in cranial Hemorrhage, and it can be problematic.

So, we are now treating everybody for this problem. I think it's important to understand the full spectrum before agreeing to Injection. **I think that it's always a good idea for mothers to consume lots of green vegetables, lots of green vegetables during the entire pregnancy if possible, because not only do you get Vitamin K, that can be delivered to the baby in normal amounts if they need it, but you're also getting Folic Acid, Magnesium, and lots of other minerals that are required to build a baby."** - Dr Suzanne Humphries, MD, in "Vaccines, Diseases and Health", Lecture, 2014.

The Vaccines of Vitamin K Include an Aluminium Toxicity Warning

Vitamin K1 (phytonadione) (Rx)
Black Box Warnings

"Severe reactions, including fatalities, have occurred during and immediately after IV administration, even when precautions have been taken with proper dilution and avoidance of rapid infusion.

Severe reactions also reported after intramuscular administration; typically, these Severe Reactions involve:

1. Hypersensitivity.
2. Anaphylaxis (severe, sudden, and potentially life-threatening allergic reaction); and include:

a. Shock.
b. Cardiac Arrest.
c. Respiratory Arrest.

IV/IM reactions may occur with first dose (no prior exposure to phytonadione). Restrict use of IV/IM routes to situations where subcutaneous administration is not feasible and serious risk involved is considered justified."

Complications From Aluminium Toxicity Affects All Organ System

Pathophysiology

"Aluminum Exerts its Toxic Effects on the body through various mechanisms, including disrupting or inhibiting enzymatic activity, altering protein synthesis and nucleic acid function, and modifying cell membrane permeability. Aluminum catalyzes the production of reactive oxygen species, leading to cellular damage through oxidative stress, decreases antioxidant activity, disrupts cellular iron homeostasis, ultimately resulting in Apoptosis (the process of programmed cell death, often referred to as "Cell Suicide"). Acute aluminum toxicity may present with symptoms such as nausea, mouth ulcers, skin ulcers, skin rashes, vomiting, diarrhea, and arthritic pain.

Bone

Bones act as a long-term reservoir for various metals, including aluminum. Accumulation of aluminum in bones can lead to osteoporosis by decreasing osteoblast-mediated bone formation and altering osteoclast function, resulting in increased bone fragility and a higher risk of fractures. Plasma aluminum levels are strongly associated with aluminum bone disease. Aluminum causes bone demineralization through various mechanisms, including calcium replacement, decreased levels of insulin-like growth factor-1 and type 1 collagen, inhibition of the Wnt/β-catenin pathway, apoptosis of osteoblasts, and reduced differentiation of osteoblasts.

Cardiovascular

Elevated levels of aluminum are associated with a higher incidence of cardiovascular diseases, including hypertension, coronary artery disease, and dyslipidemia. The mechanism behind cardiovascular toxicity is believed to involve oxidative stress, apoptosis, and an inflammatory response resulting from aluminum accumulation. Other complications may include toxic myocarditis, myocardial wall hypokinesia, and left ventricular thrombus.

Central Nervous System

The Central Nervous System is the primary target of aluminum toxicity. This toxicity occurs through several mechanisms; including: neuronal oxidative stress, apoptosis, neuroinflammation, neurotransmitter disruption, and cytoskeletal dysregulation.

Gastrointestinal

Aluminum ingestion and toxicity can impact the intestinal microbiome, intestinal permeability, immune responses, and inflammatory reactions. Additionally, it can lead to epithelial degeneration, goblet cell proliferation, and lymphocyte infiltration in the intestines.

Hematopoiesis

Aluminum toxicity may inhibit or reduce Hemoglobin Synthesis; leading to Anemia with Anisocytosis and Poikilocytosis.

This can result in the formation of:

1. Leptocytes.
2. Acanthocytes.
3. Echinocytes.
4. Stomatocytes.
5. Target cells.

Pulmonary

Pulmonary Tissue Damage occurs due to an increased influx of:

a. Polymorphonuclear neutrophils.
b. Interstitial inflammation.
c. Type II cell hyperplasia.
d. Reduced alveolar lavageable macrophages.

These changes can lead to various respiratory conditions; including:

1. Asthma.
2. Chronic Bronchitis.
3. Chronic Pneumonia.
4. Pulmonary Alveolitis.
5. Chronic Obstructive Pulmonary Disease.
6. Pulmonary Fibrosis.
7. Alveolar Proteinosis.
8. Pneumoconiosis.
9. Pulmonary Granulomatosis.
10. Potroom Asthma.

Renal

Aluminum is primarily cleared by the kidneys, increasing the Risk of Aluminum Poisoning in patients with chronic kidney disease. The Toxic Effects of Aluminum can reduce glomerular filtration, leading to elevated serum uric acid levels. Additionally, aluminum exposure may result in nephrotic syndrome and acute renal glomerulonephritis. Aluminum's toxic effects on renal parenchyma stem from increased oxidative stress, leading to lipid peroxidation, and protein oxidation.

Reproductive

Reproductive health may be compromised by aluminum exposure. Studies show that patients with oligozoospermia exhibit significantly higher aluminum concentrations in their semen, indicating a potential link between aluminum toxicity and fertility issues.

Histopathology

Intracellular aluminum is stored in the lysosomes of brain neurons, in most liver cells (excluding Kupffer cells), myocytes of the heart, mesenchymal glomerular cells of the kidneys, and within the mitochondria of osteoblasts.

Histopathology of cardiac tissue demonstrates that aluminum toxicity significantly alters the structure of cardiac tissues by inducing cardiac fibrosis, resulting in necrotic foci around blood vessels and disarrangement of cardiomyocyte nuclei. Aluminum exposure also significantly increases blood-brain barrier permeability.

Complications

Complications of Aluminum Toxicity are extensive, affecting nearly every organ system.

Neurological and musculoskeletal complications are common and include:

1. Osteoporosis.
2. Bone Fractures.
3. Dementia.
4. Seizures.
5. Tremors.
6. Dysarthria.
7. Impaired Coordination.
8. Motor Weakness.
9. Ataxia.
10. Myoclonus.
11. Agitation.
12. Confusion.

Cardiovascular complications involve an increased risk of:

13. Hypertension.
14. Coronary Artery Disease.
15. Dyslipidemia.

Additional complications may include exacerbation of:

16. Inflammatory Bowel Disease.
17. Anemia.
18. Pneumoconiosis.
19. Potroom Asthma.
20. Chronic Obstructive Pulmonary Disease.
21. Pulmonary Alveolitis.
22. Chronic Pneumonia.
23. Pulmonary Fibrosis.
24. Pulmonary Granulomatosis.
25. Reduced Glomerular Filtration Rate (kidneys filtering waste from blood more slowly than normal).
26. Decreased Fertility." - in "Aluminum Toxicity", StatPearls, 26 October 2024.

Veterinary Medical Trade

> ***"Vaccinations for our beloved Animal companions are just as controversial and potentially Damaging as Vaccines for Humans. A study found that 32% of cats Died within 24 months Following this Vaccination. Furthermore, the annual massive Vaccination Program instituted for canine parvovirus over 30 years ago, has been Linked With The Increasing Occurrence of Inflammatory Bowel Disease, and Heart Muscle Disease Cardiomyopathy, which is Often Fatal in Dogs. Finally, the established protocol of annual Re-Vaccinations for several types of Animal Vaccines, which Yields Tremendous Revenue for Veterinarians, Has Been Called into Question."*** *- in "Radical Medicine", 2011.*

Vaccinating Animals

> ***"Incomplete Vaccine attenuation or Vaccination of an immunosuppressed host can result in modified live Vaccines Causing The Disease, They Are Designed to Prevent. Examples of this problem are feline respiratory Vaccines Causing a mild upper respiratory tract Disease, after immunisation, and the development of Post Vaccinal Encephalitis subsequent to canine distemper Vaccination. An even more alarming example is Vaccine induction of clinical rabies*** *(Esh et al., 1982, Pedersen et al., 1978)." - Dr Tom R Phillips; Dr Ronald D Schultz, in "Veterinary Therapy" XI, 1992.*

"In the past, it was believed that Annual Vaccination would not hurt and would probably help most animals.

However, Concerns About Side Effects have begun to change this attitude.

The Client Is Paying for Something With No Effect, or with the Potential for an Adverse Reaction. I believe that Adverse Effects Are Increasing, Because We Are Putting More, and More Components Into These Animals.

There Is A Real Concern that Vaccines may Predispose certain Susceptible Individuals to Immune-Mediated Disease.

The More Antigens We Administer, the Higher the Potential for Hyper-Sensitivity. All of these Hypersensitivies, Cause a Certain Amount of Tissue Damage. The more components we combine into a single dose of Vaccine, the more likely they are to Interfere with Each Other.

Immune-Mediated Disease Has Developed in Humans Following Vaccination, as was seen with cases of Guillain-Barre Syndrome Following Swine Flu Vaccinations, and Rheumatoid Arthritis Following Influenza Vaccination. In many cases it is impossible to show a Direct Connection Between the Damage, and a Vaccine, since it is the accumulation of many antigens over many years, That Results In Clinically Evident Disease.

Vaccine Companies have:
"No Legal Obligation to Demonstrate Duration of Immunity."
It is my understanding that one should provide the current practice or art of medicine. If I or one of my colleagues were asked, we would have to say that There Is No Scientific Justification for Annual Vaccinations.
However, a veterinarian is in a tough situation if all the others in the community are Vaccinating annually, despite the scientific evidence.
I See No Justification for the use of canine Coronavirus or Lyme disease Vaccines. We are about to see a new Vaccine launched for canine Rotavirus.
I don't even know the disease it's supposed to prevent." - Dr Ronald D. Schultz, Professor and Chair of the Department of Pathobiological Sciences, University of Wisconsin, in "Are We Vaccinating Too Much?", Journal American Veterinary Medical Association, 15 August 1995.

"Giving multiple Vaccinations Does Not Boost Immunity, and, in some cases may erode it. Of Course Vaccines can Trigger Neurological, and Endocrine Diseases.
There Is An Intimate Relationship Between the Immune, Neurological and Endocrine Systems. Boosting a mother's Vaccine prior to pregnancy will not increase the level of maternal immunity in the puppies." *- Dr Schultz, in "Seminar", USA, August 2001.*

The Fascinating Bidirectional Communication Between the Immune and Autonomic Regulatory Systems

"There is an Intimate Relationship Between the Immune System and Autonomic Motor Activity. Recently, it has come to light that while the Immune System Interacts Directly within Brain regions that regulate autonomic function, the Autonomic Nervous System innervates organs that contain immune cells, such as the spleen and bone marrow. Indeed, effects on immune cells of both the Parasympathetic and the Sympathetic Nervous System have been described. Moreover, both cholinergic receptors and adrenoceptors exist on immune cells and provide the substrate for their modulation (activation or inactivation) by Nervous and Hormonal Mechanisms." *- in "The Interplay Between the Autonomic and Immune Systems", Experimental Physiology, November 2012.*

Animal Vaccinations

"Because of Dogs like "Katy" developed Immune Mediated Hemolytic Anemia (where the body rejects its own blood); ***After her Annual Vaccinations. This Syndrome has been shown to be Associated with Annual Vaccinations."*** *- Bob Rogers, Doctor of Veterinary Medicine, in "New Vaccination Protocols", 2 February 2001.*

Annual Vaccinations

> ***"Annual Vaccinations: A practice that was started many years ago and that lacks scientific validity or verification is annual re-vaccinations. Almost without exception there is no immunologic requirement for annual revaccination. Immunity persists for years or for the life of the animal. Successful Vaccination to most bacterial pathogens produces an immunologic memory that remains for years, allowing an animal to develop a protective anamnestic (secondary) response when exposed to virulent organisms. Furthermore, revaccination with most viral vaccines fails to stimulate an anamnestic (secondary) response as a result of interference by existing antibody (similar to maternal antibody interference). The practice of Annual Vaccination in our opinion should be considered of questionable efficacy."*** *- in "Canine and Feline Vaccines", Kirk's Current Veterinary Therapy XI, 1992.*

Immune Mediated Haemolytic Anaemia

> *"Immune-Mediated Hemolytic Anemia is one of the most common immune-mediated hematologic disorders in dogs and cats." - in "Immune-mediated hemolytic anemia: Understanding the nemesis", Vet. Clin. North. Am. Small Anim. Pract., 2003.*

"In Dogs, Immune-Mediated Hemolytic Anemia: Also occurs secondary to triggers, such as Infectious, inflammatory, and neoplastic diseases; Drugs; and **Vaccines.**

Important Differential Diagnoses for Hemolytic Anemia

Acetaminophen *
Cephalosporins *
Chlorpromazine *
Dipyrone *
Heparin *
Levamisole *
Methimazole/propylthiouracil *
Penicillins *
Phenazopyridine hydrochloride *
Procainamide *
Recent Vaccination *
Sulfonamides *
Topical benzocaine *
Vitamin K *
Quinidine *

(*) Denotes conditions that have been suggested to induce immunologic destruction of Red Blood Cells.

When a patient presents with possible Immune-Mediated Hemolytic Anemia, history should include a detailed account of any recent Medications or Vaccines." - in "Management of Immune-Mediated Hemolytic Anemia: A Common Hematologic Disorder in Dogs & Cats", Today's Veterinary Practice, July/August 2013.

Autoimmune Hemolytic Anemia Caused by Vaccine in Humans

"Medical Studies Show a Connection Between Vaccines, like the Flu Shot, and Autoimmune Hemolytic Anemia in both children and adults.

Often these Vaccine-triggered cases Go Unreported.

The Vaccine Adverse Event Reporting System (VAERS) managed by the FDA and CDC to collect data on rare Side Effects of Vaccines.

The most commonly reported Vaccines that Cause Autoimmune Hemolytic Anemia are:

I. Flu Shot

Reactions Commonly Associated with the Flu Shot:

1. **Guillain-Barré Syndrome**
2. **Encephalitis**
3. **Intussusception**
4. **Bell's Palsy**
5. **Shoulder Injury (SIRVA)**
6. **Brachial Neuritis**
7. **Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)**
8. **Acute Disseminated Encephalomyelitis (ADEM)**
9. **Transverse Myelitis**
10. **Paralysis**
11. **Pemphigus**
12. **Autoimmune Hepatitis**
13. **Granulomatosis with Polyangiitis**
14. **Thrombocytopenia**
15. **Optic Neuritis – Neuromyelitis Optica**
16. **Fainting – Syncope**
17. **Dermatomyositis (JDM)**
18. **Rheumatoid Arthritis**
19. **Complex Regional Pain Syndrome (CRPS)**
20. **Henoch-Schlönlein Purpura**
21. **Aplastic Anemia**

According to Health Resources and Services Administration, Influenza Vaccine has resulted in more individual compensation in the national Vaccine injury program than any other Vaccine. Between 2006 and 2018, 3,456 petitioners were awarded compensation for Flu Vaccine-Related Injuries by National Vaccine Injury Compensation Program. Since 2017 has paid $775 Million in Compensation awards to Vaccine Injury Victims.

II. Pneumonia Vaccine

Severe Reactions include:

1. **Severe shoulder pain or loss of arm movement (SIRVA).**
2. **Fainting After Injection (Syncope).**
3. **Increased risk of seizures in young children when administered at the same time as inactivated Flu Vaccine.**
4. **Allergic reaction.**
5. **GBS or Guillain Barre Syndrome.**
6. **Transverse Myelitis (TM).**
7. **Chronic Inflammatory Demyelinating Polyneuropathy.**
8. **Complex Regional Pain Syndrome.**
9. **SIRS or Systemic Inflammatory Response Syndrome.**

III. Haemophilus B Conjugate (Hib) Vaccine

Reactions and Side Effects:

1. **Shoulder Injury Related to Vaccine Administration (SIRVA)**
2. **Fainting or syncope**
3. **Brachial Neuritis**
4. **Guillain-Barre Syndrome**
5. **Anaphylaxis**
6. **Seizures**

There is a Multi-Billion Dollar Government Program to compensate people who get Autoimmune Hemolytic Anemia After A Vaccine." - in "Autoimmune Hemolytic Anemia From A Vaccine", Vaccine Injury Lawyers Mctlaw, 22 September 2025.

> *"**Immune-mediated Hemolytic Anemia (IMHA) can be** primary (idiopathic) or secondary to neoplasia, infectious agents, inflammatory diseases, **Drugs, or Vaccinations. Mortality Rates for IMHA range from 20% to 75%,** depending on the severity of clinical signs and the extent of hypercoagulability." - in "Regenerative Anemias in Animals", MSD Veterinary Manual, Merk, July 2025.*

Immune Mediated Haemolytic Anaemia

"Immune Mediated Haemolytic Anaemia, which can lead to:

1. Life-Threatening Anaemia (lack of red blood cells); this is extremely serious because red blood cells deliver oxygen all around the body, so it's not possible to live without them.

2. Kidney Damage; due to a surge of haemoglobin (contents of red blood cells) into the bloodstream.

3. Liver Problems, including Jaundice; producing a surge of bilirubin (a red blood cell breakdown product), into the bloodstream.

4. Blood Clots; which prevents the blood from reaching the Brain, Lungs, Spleen, Kidneys, Liver. This is a potentially life-threatening complication of Immune Mediated Haemolytic Anaemia.

5. Immune Mediated Haemolytic Anaemia; if left untreated: **Can Quickly Lead to Death.**" - in "Immune mediated haemolytic anaemia (IMHA) in dogs", PDSA, 10 May 2023.

Vaccine Associated Sarcoma; Cancers that Start in the Bones & Soft Tissues

> ***"Feline Injection-Site Sarcomas are Cancerous Tumors that can arise Following Injections.*** *It is thought that* ***Inflammatory Processes Related to Administration of Injectable Products Can Lead to Formation of Sarcomas. Recent Studies Suggest that Vaccines, And Other Injected Agents Are Risk Factors for Feline Injection-Site Sarcomas."*** *- in* ***"Vaccines and Sarcomas: A concern for cat owners",*** *American Veterinary Medical Association, 7 December 2020.*

> ***"Feline Injection-Site Sarcoma (FISS) is a subcutaneous Tumor that rarely arises in the dermis. It Commonly Develops at Sites of Vaccination; hence, in the past it was named "Vaccine Associated Fibrosarcoma", or "Post-Vaccinal Sarcoma."*** *- in "Feline Injection-Site Sarcoma", Veterinary Pathology, 2017.*

"Has a Cause-and-Effect Association Between Administration of Vaccines and Sarcoma formation been firmly established?

Dr Larry T. Glickman, VMD, DrPH, Department of Veterinary Pathobiology, School of Veterinary Medicine, Purdue University: Results of a study ("Epidemiologic **Evidence for a Causal Relation Between Vaccination and Fibrosarcoma Tumorigenesis** in Cats", J. Am. Vet. Med. Assoc., 1993), indicate that **there is a Significant Association Between Prior Vaccination** for FeLV (odds ratio, 5.4) or rabies virus (odds ratio, 1.99), **and the subsequent development of a Fibrosarcoma at the Vaccination Site.** Furthermore, the risk of cats developing F**ibrosarcomas After Administration of a single Vaccine** in the cervical or interscapular region was approximately **50% higher than that in cats Not receiving Vaccines in those regions.**

The risk in cats that received 2 Vaccines was approximately 127% higher than that in cats not receiving Vaccines in those regions, and **the risk in cats that received 3 or 4 Vaccines was approximately 175% higher,** than that in cats not receiving Vaccines in those regions.

The magnitude of this association is fairly strong, but I don't believe that enough studies have been performed to determine that there is a consistent association.

Results of another study ("Postvaccinal Sarcomas in the cat: epidemiology and electron probe microanalytical identification of Aluminum", Cancer Res., 1992) reporting the presence of Aluminum Adjuvant in Fibrosarcomas developing at Vaccination sites provided some evidence for biological plausibility.

Dr Philip H. Kass, DVM, MPVM, PhD, DACVPM, Department of Population Health and Reproduction, **School of Veterinary Medicine, University of California**: I believe that through experimental work that has been performed and published, through observational and even anecdotal information that has now been generated over and over, and through the few epidemiologic studies that have been performed, although we can never truly prove anything in a scientific (and logical) sense, even through experimentation, T**here Is An Abundance of Evidence to Indicate that Vaccine-Associated Feline Sarcoma Is A Real Phenomenon, and the cost of waiting and doing nothing is much greater than the cost of acting now.**

Dr Wallace B. Morrison, DVM, MS, DACVIM, Department of Small Animal Clinical Sciences, School of Veterinary Medicine, Purdue University, **Representing the Veterinary Cancer Society**: There have been more than 2 studies concerning **Vaccine-Associated Feline Sarcomas published by Dr Kass ("Epidemiologic evidence for a Causal Relation Between Vaccination and Fibrosarcoma Tumorigenesis in cats", J. Am. Vet. Med. Assoc., 1993; "Multicenter case-control study of risk factors associated with development of Vaccine-Associated Sarcomas** in cats", J. Am. Vet. Med. Assoc., 2003).

Another Study ("Post Vaccination Sarcomas in Cats", J. Am. Vet. Med. Assoc., 1993), and Numerous Case Reports on Vaccine-Associated Feline Sarcomas have been published:

1. **"Widespread Metastastisis of a Fibrosarcoma Associated with a Vaccination site in a Cat"**, Feline Pract., 1995.
2. **"Metastasizing Liposarcoma Associated with a Vaccination site in a Cat"**, Feline Pract., 1996.
3. **"Vaccine site-Associated Sarcomas in cats: clinical experience and laboratory review (1982–1993)"**, J. Am. Anim. Hosp. Assoc., 1996.
4. **"Pulmonary and Mediastinal Metastases of a Vaccination-site Sarcoma in a Cat"**, Vet. Pathol., 1996.
5. **"Metastatic Vaccine Associated Fibrosarcoma in a 10-year-old Cat"**, Canada Veterinary Journal, 1997.

Another interesting aspect is what pathologists tell us about the rather unique histologic appearance of these sarcomas and the ways they differ from other kinds of sarcomas.

There are also 2 studies, 1 in ferrets ("Histology and immunohistochemistry of seven ferret Vaccination-site fibrosarcomas", Vet. Pathol., 2003), and 1 in dogs, ("Fibrosarcomas at presumed sites of Injection in dogs: characteristics and comparison with non-vaccination site Fibrosarcomas and feline Post-Vaccinal Fibrosarcomas", J. Vet. Med. A. Physiol. Pathol. Clin. Med., 2003), on the development of presumptive Vaccine-Associated Sarcomas in other species, and the histologic appearance of sarcomas in those species was similar to what has been seen in cats, **including the presence of Aluminum in Tissues** ("Histology and immunohistochemistry of seven ferret Vaccination-site Fibrosarcomas", Vet. Pathol., 2003, "Fibrosarcomas at presumed Sites of Injection in dogs: characteristics and comparison with non-vaccination site Fibrosarcomas and feline Post-Vaccinal Fibrosarcomas", J. Vet. Med. A. Physiol. Pathol. Clin. Med., 2003).

I Believe it is a Complete Story, and I'm Confident that There Is An Association between Vaccine Administration and Sarcoma Development in cats.

Dr Jane E. Brunt, DVM, Cat Hospital at Towson, Baltimore, MD: **I've seen Vaccine-Associated Sarcomas, As Have my colleagues.**

It seems clear to me and my colleagues in American Association of Feline Practitioners (AAFP), that results of additional studies are not needed to prove that there is an Association Between Vaccine Administration And Sarcoma Formation in cats.

Is there any evidence that the incidence has changed as a result of newly recommended feline Vaccination protocols?

Dr Ronald D. Schultz, PhD, Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin: **Vaccination of cats for rabies has not decreased; if anything, it's increased because there are actually more states requiring it than was the case in the early 1990's.**

So, I would not expect to see any decrease in the incidence of Vaccine-Associated Sarcomas strictly because of a change in the number of cats receiving rabies virus Vaccines. Something that has changed, though, is the availability of non-adjuvanted rabies virus Vaccines. Perhaps that is an area that we should investigate further. Again, for the sake of argument, let's assume that **FeLV Vaccines, or at least a certain number of them, cause a problem.**

Dr Thomas H. Elston, DVM, DABVP, The Cat Hospital, Tustin, CA, Representing the American Association of Feline Practitioners: In an admittedly small sample size is that in my practice, where **90% of my patients no longer receive FeLV Vaccines, during the last 5 years, I have not seen any Fibrosarcomas Associated with FeLV Vaccines, but continue to see as many Fibrosarcomas Associated with Administration of rabies virus Vaccines.**

Dr Larry T. Glickman: Monitoring the ratio of Vaccination site to nonvaccination site Sarcomas is a good indicator of change, even if numbers of submissions of masses to laboratories vary.

Results of 1 study **("Feline Fibrosarcomas at Vaccination sites and non-vaccination sites", J. Comp. Pathol., 1996), Clearly Indicate that the ratio of Vaccination site Sarcomas to non-vaccination site Sarcomas seen in a typical diagnostic laboratory has Increased Dramatically.**

In 1989, the ratio was 0.54, meaning **there were half (54%) As Many Vaccination site Sarcomas as there were non-vaccination site Sarcomas.**

A year later, the ratio was 1.0 (100%); it More Than Doubled.

In 1991, the ratio was 1.47 (147%); in 1992, it was 1.86 (186%); in 1993, it was 2.6 (260%); and in 1994, it was 4.3 (430%).

Are Vaccine-Associated Sarcomas a Problem Outside of North America?

Dr Wallace B. Morrison: Papers published from Italy ("Fibrosarcomas at presumed sites of Injection in dogs: characteristics and comparison with non-vaccination site fibrosarcomas and feline Post-Vaccinal Fibrosarcomas", J. Vet. Med. A. Physiol. Pathol. Clin. Med., 2003); and the Czech Republic ("Postinflammatory Sarcoma in cats", Exp. Toxicol. Pathol. 2003) report them.

In fact, they are seen throughout Europe ("Immunohistochemical expression of p53, fibroblast growth factor-β, and transforming growth factor-α in **Feline Vaccine-Associated Sarcomas"**, Vet. Pathol., 2003).

Dr Lawrence D. McGill, DVM, PhD, Animal Reference Pathology, ARUP Laboratories, Utah: **In my personal experience in pathology, I've Seen Cases from Japan.**

Dr Mattie J. Hendrick, VMD, DACVP, Department of Pathobiology, School of Veterinary Medicine, University of Pennsylvania, Epidemiology/Pathology Chair: **And Australia ("Do Postvaccinal Sarcomas Occur in Australian cats?",** Australia Veterinary Journal, 1997).

Dr Larry T. Glickman: It's a Worldwide Problem." - in **"The current understanding and management of Vaccine-Associated Sarcomas in Cats",** Vaccine-Associated Feline Sarcoma Task Force: Roundtable Discussion, Journal of the American Veterinary Medical Association, 1 June 2005.

History of Injection-Site Sarcomas Association with Aluminum

"Over 20 years ago, pathologists from the University of Pennsylvania reported an alarming 61% increase in the number of Injection-site Fibrosarcomas among feline biopsy accessions from 1987 to 1991.

This increase was epidemiologically linked to the enactment of a Mandatory 1987 Rabies Vaccination law for pet cats residing in Pennsylvania.

Adjuvants Role in Pathogenesis of Vaccine-Associated Sarcoma

Vaccine-Associated Sarcoma (now known as FISS).

In 1985 the first FeLV Vaccine (inactivated, Aluminum Adjuvanted), is introduced (Leukocell, Norden Laboratories).

In 1993, an epidemiologic study involving 345 cats with Fibrosarcoma provided evidence that Vaccination with feline leukemia virus (FeLV), and rabies virus Vaccines Could Lead to Tumorigenesis at the Injection Site." - in "Feline Injection-Site Sarcoma", Today's Veterinary Practice, July/August 2013.

Vaccination Induced Fibrosarcomas

"Because of Cats like "Maria" **developed a Fibrosarcoma from her Annual Rabies and Leukemia Vaccinations.**

This is a Terminal Type of Cancer.

Even with surgery, chemotherapy and radiation therapy, the average survival time for cats with Vaccination Induced Fibrosarcomas is less than 3 years.

Because Aluminium Adjuvants have been incriminated, we have avoided Aluminium Adjuvants for over 10 years.

1. Titers of antibody levels do not accurately predict immunity or lack of immunity.

2. There is no Scientific Data to support manufacturers label directions to re-administer Modified live virus (MLV) Vaccines annually.

3. Vaccines are Not Harmless. In addition to Immune Mediated Haemolytic Anaemia, and Injection site Fibrosarcomas mentioned above Adverse Events, and Reactions will be discussed with each individual Vaccine.

4. There Is No Justification for Vaccination of Dogs for Corona Virus. (23)

5. There Is No Justification for Vaccination of adult cats for Feline Leukemia. Cats over 1 year of age are immune to FeLV Whether they are Vaccinated or Not. This is age related immunity.

6. Vaccines should Not be Marketed in areas of the country where the diseases are very rare. Leptospirosis and Lymes disease are not prevalent in Texas.

7. The Risk for Side Effects Outweigh the possible benefits for diseases like Feline Chlamydia , & Canine Leptospirosis.

8. Owners should be accurately informed of efficacy, risk vs. benefit, prevalence of disease, and potential side effects of each Vaccine.

9. The USDA, APHIS, Center for Veterinary Biologics needs to revise its standards for licensing animal Vaccines." - Bob Rogers, Doctor of Veterinary Medicine, in "New Vaccination Protocols", 2 February 2001.

Vaccinations Not Recommended For Dogs

"Multiple Components in Vaccines compete with each other for the immune system and result in lesser immunity for each individual disease as well as increasing the risk of a reaction. (19)

1. Coronavirus Vaccine

Canine Coronavirus is only a disease of puppies less than 6 weeks of age (15-p20). It is a rare, self-limiting disease (**dogs get well in 3 days without treatment)** (3). **Corona Virus does not cause disease in adult dogs.** Cornell University and Texas A&M University have only diagnosed one case each in the last 7 years. **For a veterinarian to Make a Diagnosis of Coronavirus Based On Clinical Signs Is Highly Presumptive.**

Only Electron Microscopy of Feces Can Verify the Presence of canine Coronavirus. This is Only Done at places such as Texas A & M Diagnostic Laboratory, and they report no positive tests. **The presence of the "Virus" does not indicate it is the cause of disease. Dogs over 6 weeks of age cannot be experimentally induced to exhibit disease from Coronavirus. Immunologists have reason to believe that the Vaccine Does Not Work.** Mucosal secretory IgA antibodies would be necessary to protect a dog against this disease & an injectable vaccine will not provide this type of protection. (13, 19- p18, 21). **I see No Justification for the Use of Coronavirus Vaccine. In 1985 a significant number of dogs - more than 189 - Died from Encephalitis caused by Coronavirus Vaccine**, combined with the Rockborn strain distemper. (3, 21) **An unfortunate & heartbreaking catastrophe caused by an Unnecessary Vaccine.**

2. Leptospirosis Vaccine

Is a **Common Cause of Adverse Reactions** in dogs ranging from: **Life Threatening Anaphylactic Reactions to mild facial swelling and Urticaria.**

Leptospirosis is an Infection of the Kidneys and Liver. The most commonly used Vaccines contain different serovars-L. canicola & L.icterohaemmorrhagiae.

Cross protection is not provided and protection is short-lived (6 - 7 months) (19). New Vaccines recently introduced by Fort Dodge include L. gryppothyposa., and L. pomona. Records at Texas Veterinary Diagnostic Lab showed only 8 Cases of Leptospirosis in dogs in Texas in 2000. L. Icterohaemmorrhagiae 3 Cases, L. canicola 2 Cases, pamona 2 Cases, L grippotyphosa 1 Case. Although this is a serious and life threatening disease, in a state with an estimated dog population of over 7 Million, **I Do Not Think The Risk Justifies Routine Vaccination.**

This Vaccine Should Not Be Given to puppies less than 16 weeks of age as **it is very immunosuppressive. It Can Interfere with immunization against parvo & distemper. Reactions are common. The risk of side effects outweigh the benefits.**

3. Lymes Disease Vaccine

A Report by Dr Jacobson recorded **790 dogs which developed Polyarthritis after Vaccination with Lymes Disease Vaccine. These dogs did not show antibody titers suggestive of previous Lymes disease infection. There is a class action suit in human medicine for failure to warn people about the possibility of developing polyarthritis from human Lymes Disease Vaccine.**

The effectiveness of the Vaccine is reported to be low. Because of the questionable efficacy most veterinary schools do not recommend Lyme Disease Vaccine.

Amitraz tick collars should be used with extreme caution, as they are toxic if chewed on or swallowed by a dog or children. **Vaccinating pets against Lymes disease does not provide any protection for the owners.**

Vaccination Concerns

The AVMA Council on Biologic and Therapeutic Agents presented their consensus at the July, 2000 137th Annual AVMA Convention.

They focused on the following points:

1. When an **Annual Booster Vaccination** with a modified live virus vaccine (i.e. Distemper, Parvovirus or Fe Distemper), is given to a previously vaccinated adult animal - **no added protection is provided.** Antibody titers are not boosted significantly, memory cell populations are not expanded. N**o additional protection is provided.** (23)

2. Vaccine Manufacturers label claims should be backed by scientific data. There Is No Scientific Data to support label directions for re-administration of MLV Vaccines Annually. (23)

3. Vaccines Are Not Harmless. Unnecessary Side Effects, and Adverse Events can be minimized by Avoiding Unnecessary Vaccinations.

4. Veterinarians need a standard procedure to report Adverse Events from Vaccinations.

Unfortunately, members of the Council on Biologic and Therapeutic Agents appear to have yielded to Political Pressure within the American Veterinary Medical Association, and from Drug Companies. Their final document, "Principals of Vaccination" is so watered down and so ambiguous in its wording, that it is hard to decipher, and can easily be misinterpreted. In many instances they did an **About-Face Without Any Scientific Basis.**

In the practice of medicine, the emphasis should be on safety, and that **no medicine should be given more frequently, longer, or at a higher dose than is necessary. Some organizations have come up with a political compromise suggesting Vaccinations every 3 years (15-p41) to appease those who Fear Loss of Income vs. those concerned about Potential Side Effects. Politics, traditions, or the Doctor's Economic Well Being Should Not be a Factor in Medical Decisions."** - Bob Rogers, Doctor of Veterinary Medicine, in "Vaccination Concerns", 23 November 2002.

> ***"Risk of immune-mediated hemolytic anemia and Allergic Reactions are reduced by less frequent use of Vaccines as well as by Avoiding Unnecessary Vaccines such as K-9 Corona Virus, and chlamydia for cats, and Ineffective Vaccines such as Leptospirosis and FIP. Intranasal vaccines for Rhinotracheitis and Calici virus, (two upper respiratory viruses of cats) when used following parenteral Vaccines may provide a more complete protection than injectable vaccines alone, and with less Risk of Serious Reactions. I think you will agree that No Medications should be given more frequently, at a higher dose or for a longer period of time than is necessary to treat or prevent disease, without side effects. Vaccines should be treated the same way."*** *- Bob Rogers, Doctor of Veterinary Medicine, in "Conclusions",* ***4 February 2001.***

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The “Rabies Virus” Farce

Dr Elmer Lee, MD, Relates an Experience Where No Rabies Was Found

“The following letter was written by Dr Elmer Lee, MD, an authority on the subject, who has made exhaustive studies in Russia, Germany and France and is well known as a Lecturer on Medical and social questions.

It was addressed to the New York Globe, recently published:

“When rabies and hydrophobia are mentioned, think of this:

There was a great scare not long ago on Staten Island on account of so-called mad dogs. One of the dogs called mad was taken by an agent of the S.P.C.A. to a kennel, where he died 2 days later.

The dog was chased, tormented, stoned; snapping at dogs and people as it roamed; and was pronounced by the authorities of the health board as mad.

It was said that several persons were bitten by this dog and that they were to be treated at an institute to prevent hydro-phobia.

The dog, after death, was delivered to the Loomis laboratory in New York, where I made an autopsy, assisted by 2 Physicians, Professors in one of the Colleges of Medicine. The autopsy was thorough, including the head, chest and abdomen and all organs. The brain was normal; No Evidence of Disease.

The chest and lungs were normal. The right heart was filled with 60 to 70 round thread worms, 6 to 10 inches long, forming a tangled mass of wriggling, twisting worms, blocking the valves and extending several inches into the pulmonary artery. Death was caused by suffocation, due to the worms in the tight chambers of the heart. The Stomach Was Filled with Curled Hair that had been gnawed from some carriage cushion in the frenzy of the dog to get relief from the distress caused by the Worms in the heart. Worms are common in dogs and Cause Many of Their Diseases, and clearly explain the Anxiety, Nervousness and Other Symptoms that are Mistaken for Rabies.

Once a dog is called mad, there are many who always so remember the incident and who never learn what was the true condition.

Rabies Is A Rare Disease, one that has been seen by few of the physicians of the land. It Is Even Scientifically Doubted That There Is A Specific Disease Such As Rabies is considered to be.

But Fear And Misinformation Are Passed Along Time After Time and by Generation After Generation. If there is no Rabies, it follows that there is no Hydrophobia arising from a particular poison from a scratch, bite or touch of a dog. I have seen diseased and sick dogs, but Not A Case of Rabies.

So I have seen Hysteria, Excitement, Fear and Nervous Exhaustion in human beings, followed by death, but not a case of Hydrophobia.

In all candor and assurance Let the People Dismiss From Their Minds Fear and Dread from Mad Dogs and Hydrophobia." - Dr Elmer Lee, MD, in "Mad Dog Scare Explained", Our Dumb Animals, October 1910.

The Corona Vaccine: Is A Vaccine In Search Of A Disease, Don't Use The Vaccine - 2007

"In 1999 the World Health Organization (WHO) listed the veterinary Vaccine adjuvant as having a Carcinogensis rating of 4 which is high.

That was mostly due to the Aluminum Hydroxide. Too many vets don't know they are ignorant and haven't even ever thought of what they are doing (not 2 % of the populations of vets that do inject Vaccines have a clue as to what is on the Material Safety Data Sheet (Safety Data Sheet) about that Vaccine and could even answer a multiple question test about the contents, safety factors and long term carcinogenic studies done). Kennel Cough is Not A Vaccinable Disease, realize this and stop the boarding kennels from making the dogs sick.

In People, Cows, Dogs, Cats, Horses, Birds Etc., the Respiratory Disease Complex Is Also Not A Vaccinable Disease.

Stress, Diet, Crowding, Ventilation: all play a part in who gets what and how bad they get it.Anytime you inject anything into a patient you have the potential of killing them. **Corona Vaccine Is A Vaccine In Search Of A Disease. Don't Use The Vaccine. For 15 years there was one Feline Leukemia Vaccine out there on the market that was used in thousands and thousands of cats, and yet was no more effective of inducing immunity against "Feline Leukemia virus" than salt water! The Vaccine was able to induce an anti-body reaction and this is the only requirement for a Vaccine to get licensing. In other words, they don't have to work! Coronavirus Vaccine was never licensed in Europe, Why?**

Because they knew it never worked.

In the US we have the FDA, we have conflict research, we have conflict interrelationships, bribes. We have a system you can not trust.

Vets out of school 10 years or longer, have had little to no immunology, and no Vaccinology. Don't expect them to have a clue on what they are doing when Vaccinating. In the case of genetic damage over time, and cancer production, it never is fully realized and certainly never acknowledged.

Rabies is the only regulated Vaccine.

Rabies is also the Vaccine most likely to lead to an Adverse Event.

Veterinarians that are Administering Rabies yearly, for the sake of Vaccinating yearly: Are Committing Malpractice, and Should be Prosecuted.

What Is Going On In Human Medicine Is Obscene

Dr Schultz used to look to the medical profession for guidance on the application of Vaccine protocols, but understands that:

What Is Going On In Human Medicine Is Obscene.

He states that if the Vaccine Protocol Doesn't Kill the child, It Will Render Them Unable to think!" - in "Summary of a Presentation by Dr Ron Schultz", Journal of the American Holistic Veterinary Medical Association, October - December 2007.

The Dental Medical Trade

Mercury Is One of the Most Toxic Elements On the Earth's Surface

"Chronic exposure to Elemental Mercury Hg0 (one of the most toxic elements on the earth's surface), results in vomiting, abdominal pain, renal tubular necrosis, emotional changes, and cognitive deficits, whereas severe lung and neurological damage is caused by acute exposure to Elemental Mercury Hg0.

The toxicological effects of mercurous compounds include abdominal pain, nausea, vomiting, toxicity of blood, damage to the central nervous system, memory disturbances, fatigue, muscle weakness, and kidney damage.

Additionally, human exposure to mercuric compounds causes numerous issues such as memory and concentration troubles, irritation of skin and eyes, toxicity of the reproductive system of both males and females, malfunction of the immune system, loss of appetite and weight, and changes in mood and personality." - in "The Toxicity of Mercury and Its Chemical Compounds: Molecular Mechanisms and Environmental and Human Health Implications: A Comprehensive Review", ACS Omega, 22 January 2024.

Mercury Is A Harmful Neurotoxin

> ***"Dental amalgam is a mixture of metals, consisting of liquid (elemental) Mercury*** *and a powdered alloy composed of silver, tin, and copper.* ***Approximately half (50%) of dental amalgam is Elemental Mercury by weight."*** *- in "Dental Amalgam Fillings", U.S. Food and Drug Administration, 18 February 2021.*

"Mercury Is A Potent Neurotoxin that can Harm the Nervous, Digestive, Immune Systems, as well; Lungs, Kidneys, Skin, Eyes, even at low levels of exposure.

Its organic form, Methylmercury, is particularly Dangerous to Unborn Babies, and can move through the food chain building up in insects, fish and birds.

> ***"Dental Amalgam is tried and tested material and pulling the plug without a transition period Would Effectively Bankrupt NHS Dentistry." - Eddie Crouch, British Dental Association chair.***

Britain is lagging behind the rest of the world on phasing out mercury dental fillings, with 43 countries having already banned Mercury Amalgam.

Northern Ireland will outlaw Mercury fillings from 2035 but No Such Ban Is Planned in the Rest of Britain." - in "Toxin levels in fish lead to calls for UK-wide ban on Mercury Dental Fillings", The Guardian, 30 October 2025.

The Mixture of Sound Advice and Nonsense; The Story of The Dental Medical Trade

"I am not satisfied with the local theories of the aetiology of Caries, and have promulgated the suggestion that the predisposing cause of the condition, without which local causes can have no deleterious action, is the **Production of a Condition of Chronic Acidosis, in the compensation of which there will occur a change in the constitution, and the reactions of the saliva which, through these physical agencies, May Decalcify the Enamel. An Excess of Carbohydrate in the Diet, will be productive of an Excess of Acids brought about as the result of deficient oxidation**, which, entering the blood will cause a tendency in this direction, and in this way.

An Excess of Sugar may be a Dangerous Matter; this, however, does not mean that sugar in itself is a dangerous substance from the point of view of tooth preservation, it simply means that in excess it has dangerous properties; it is very essential, therefore, that the method of its action should be understood before it is condemned, especially so when we remember **how valuable sugar is as an article of diet in young children, in whom, it has been our habit to attempt to limit its amount.** In this connection Hutchinson, has said that: **even if sugar does destroy the teeth of children this is a small price to pay considering its enormous propensities for good in their metabolism."** - in "The Mouth Mirror", June 1930.

Synthetic "Fluoridation" of Drinking Water

Synthetic Fertiliser Companies, particularly those producing Phosphate Fertiliser, generate significant amounts of Toxic Fluoride Byproduct, which they largely dispose of by selling it for use in Municipal Water Fluoridation.

This byproduct, known as "Fluorosilicic Acid" and "Hydrofluorosilicic Acid", is captured from factory emissions to avoid air pollution, and is often, after minimal processing, used as the primary chemical for water fluoridation in the United States.

Synthetic Fertiliser Companies to get rid of a Toxic Chemical Byproduct, and sell it to Municipal Governments, as a purported "health product."

This is another man-made problem, as Dental Caries increased from the late 1800's, and became significantly worse up to the 1960's.

Are we supposed to believe that a Fluoride deficiency was to blame?

"Highly Toxic: "Hydrogen Fluoride", and "Silicon Tetrafluoride" gases, are by-products of fertilizer production. Prior to the 1970's, these pollutants were vented into the atmosphere and gave central Florida some of the most noxious air pollution in the country.

During the 1960's, however, complaints by farmers and ranchers eventually forced reluctant manufacturers to invest in pollution abatement scrubbers that converted toxic vapours into "Fluorosilicic Acid" (FSA), a dangerous but more containable liquid waste.

The U.S. National Institute for Occupational Safety and Health cautions that Fluorosilicic Acid (FSA), an inorganic fluoride compound, has dire health consequences for any worker that comes into contact with it.

Breathing its fumes causes severe lung damage or death and an accidental splash on bare skin will lead to burning and excruciating pain. Fortunately, it can be contained in high-density cross-linked polyethylene storage tanks.

It is in such tanks that Fluorosilicic Acid (FSA) has for the past half century been transported from Florida fertilizer factories to water reservoirs throughout the United States.

Once there, it is drip fed into drinking water.

This is a practice that the American Dental Association, and numerous scientists and public health officials describe as "the precise adjustment of the existing naturally occurring fluoride levels in drinking water to an optimal fluoride level; for the prevention of dental decay"." - in "Toxic Treatment: Fluoride's Transformation from Industrial Waste to Public Health Miracle", Origins, Ohio State University, March 2018.

Neurotoxic Effects From Fluorosilicic Acid

"The meeting is convened to gather information about the clinical use and safety of orally ingestible unapproved prescription drug products, tablets and drops, that contain fluoride and are intended for use in children. This is not a decision-making meeting nor is it a meeting about fluoride in water. We will explore safety concerns and potential risks associated with these products, with a focus on oral and gut health, neurocognitive development, and thyroid function.

- Does the National Sanitation Foundation have a position on what the upper tolerable Daily Dose of Fluoride that will not cause Neurotoxic Effects Is?

> ***"Since we have Not Conducted Risk Assessments on any of the Fluoridation Chemicals, we Do Not Have a Position; on the daily dose that would be appropriate to Prevent or to Reduce the Risk For Neurotoxic Effects From Fluoride Exposure." - Dr Amanda Phelka, BA, MS, PhD, Principal Scientific Consultant, Toxicology, National Sanitation Foundation (International)***

The ingestible prescription fluoride products were largely dispensed to children, and the prescriptions for these products were most frequently written by Pediatricians and Dentists. Who is dispensing these products: It's Pediatricians first, accounting for about 43% of prescriptions, followed by Dentists, and then family Nurse Practitioners, and other specialties." - in "Use of Orally Ingestible Unapproved Prescription Drug Products Containing Fluoride in the Pediatric Population", Reagan-Udall Foundation for the FDA (a non-profit, non-government organization created by Congress to help the FDA do more to protect and promote the public's health), 23 July 2025.

Please Note: Naturally Occurring Fluoride is a totally different product.

Chapter 43

The Medical Trade "Science"

> ***"Unfortunately for the great science of medicine it has no law.***
> ***Effects are seen, causes are unknown."*** *- Dr Thomas Stritch Dowse, MD, in "Lectures on Massage and Electricity, In the Treatment of Disease", 1906.*

An Indictment to Cell Biology and Neurobiology

"Since 1970, I have examined large areas of Cell Biology and of Neurobiology.
I have concluded that the cell biologists have made substantial errors in their experiments, mainly because they have not carried out adequate control experiments;

Have Disregarded the Laws of:

1. Geometry.
2. Thermodynamics.
3. Chemistry.
4. Physics.

Thus, having been unwilling to recognise the artefacts produced by the procedures used in Histology, and Electron Microscopy.

> ***"Electron microscopy: Infected Vero cells were scraped from the flask, pelleted by low speed centrifugation, rinsed with 0.1M Phosphate Buffer, pelleted again and fixed for 2 hours in 2.5% Buffered Glutaraldehyde. Specimens were post fixed with 1% Osmium Tetroxide, en bloc stained with 4% Uranyl Acetate, Dehydrated and embedded in Epoxy Resin. Ultrathin sections were cut, stained with 4% Uranyl Acetate, and Lead Citrate, and examined with a Thermo Fisher/FEI Tecnai Spirit Electron Microscope."***
> *- in "Isolation and characterization of SARS-CoV-2 from the first US COVID-19 patient", BioRxiv, 7 March 2020.*

Here, I have summarised my publications since 1972.
The Responses to the points I have made are indicated in Italics.
My Conclusions in Bold.
I have already published a list of unanswered questions in biology and neurobiology, (Hillman, 2003), most of which still remain unanswered in 2013.

Molecular Biology

The chemistry of living intact biological systems.

> *Responses: Many biologists consider that molecular biology, biochemistry and the function of tissues, can be studied by examining dead, homogenised, stained, or tissues which have been grossly changed from their states in vivo.*

Conclusions: Biologists have shown little interest in the effects that the procedures they use, have on the structure and chemistry, of the tissues they are studying. This has lead them into the study of many artifacts, and distortions of the chemistry of the living systems.

The Second Law of Thermodynamics

This states that in a closed system, any change in entropy, such as homogenisation, centrifugation, dilution, filtration, or elution, must cause a change in free energy. Free energy drives the rates and the equilibria of all chemical reactions. Thus, it is not possible to change the entropy of a system without changing its chemistry.

> *Responses: Those who homogenise tissues, or carry out subcellular fractionation, have simply ignored this law, although they have not denied that it is relevant. It has also been said that this is not a useful criticism, because it would make experiments in vitro virtually impossible.*

Conclusions: I have published a list of experiments, mostly in vivo, which can be done with minimal disobedience to the second law of thermodynamics. (Hillman, 2008).

Light Microscopy and Histology

Histology and histochemistry involve fixation, dehydration, sectioning, and staining, tissues, which shrink and distort them, and they are subject to a battery of mostly unnatural chemicals, so that these techniques are not acceptable to find out the structure or the biochemistry of living cells.

> *Responses: It is true that histology, histochemistry, and electron microscopy, require many chemical reagents and mechanical manipulations, but most biologists believe that these procedures give real information about the structure of cells.*

C.: We have shown the distortions produced by histology and histochemistry, and the artefacts produced by electron microscopy (Hillman and Sartory 1980). Examination only of unfixed, and unstained tissues gives reliable information.

Electron Microscopy

Electron microscopy involves depositing heavy metal stains on tissues, fixed by chemical fixatives or deep freezing, and looking at the stains plus tissues, without knowing the contributions of each. The assumption of both histologists and electron microscopists is that the reagents do not change the structure, or alter chemistry of the tissues significantly.

> *Responses: The explanation, which has been offered about our assertion that the procedure for electron microscopy produces many artefacts, is that electron microscopists select the micrographs which they use to illustrate the particular features they wish to show.*

Conclusions: This does not explain why the membranes round the cell, the nucleus, and the mitochondria which appear remarkably uniformly distant apart in virtually every electron micrograph, which will have been cut from different directions. We have concluded that the electron microscope is not a suitable instrument to examine biological tissues, because heavy metal salts are deposited on the fixed tissues, and the procedure produces many artefacts, (Hillman and Sartory, 1980).

The Shapes of Cells

These can only be studied by light microscopy of living or unfixed cells, as histological, histochemical, immunocytochemical and electron microscopical, preparation procedures, distort and shrink cells in tissues. It makes them more square or cubical, as they compress each other. Most histologists, histochemists and electron microscopists do not pay much attention to these distortions.

> *Responses: They believe that both histology and electron microscopy give more accurate views of the structure and even the chemistry of the tissues, than does the examination of unfixed issue by light microscopy, or observations in vivo.*

Conclusions: Some biologists may not have read the literature on the effects of their procedures on the shapes of cells.

The Chemistry of the Cell Membrane

The chemistry of the cell membrane was originally examined by low angle diffraction. (Schmitt, Bear and Clark, 1935). It was also calculated by reference to the experiments of Gorter and Grendel (1925), and the Davson-Danielli (1936) lipid-protein hypothesis. Recently, it has been measured in membrane fractions.

> *Responses: Subcellular fractionation has been used to derive values for the concentrations of lipids and proteins in cell membrane fractions.*

Conclusions: One cannot study its chemistry by electron microscopy either. Therefore, its chemistry cannot be known despite the confident statements in the literature about it. Various authors have proposed a large number of different orientations of the molecules within it, precisely because there is no way of deciding for certain what their orientations are in life, (see Hillman, 2008, pages 109-110). All standard textbooks of biology show the orientation of the lipids and proteins in the cell membrane, but, unfortunately, these models are only hypotheses. It may be concluded that it is impossible to know the chemistry of the cell membrane, its width, its structure, and the orientation of molecules within it.

Ion Channels

An electron micrograph of only one ion channel has ever been described, (Toyoshima and Unwin, 1988), whereas there are believed to be 10s of them across the membranes of every nerve cell. The minute patch clamp currents, which physiologists detect, probably come from chemical junctions, and electronic components in the recording systems used (Hillman, 2008). Patch clamp electrodes have been shown to be blocked up by tissue

> *Responses: There is plenty of physiological evidence for the existence of these channels.*

Conclusions: It is only a hypothesis that the small currents (pA) originate from the structures postulated to be ion channels. It is a proper question to ask, why all cells do not appear to be pitted by ion channels. Even those who believe that ion channels exist, agree that only one of the large number of different channels postulated, has been detected.

Receptors

Many receptors have been identified, and they have been sequenced. Their diameters have been calculated, and they are up to 3 times the widths of the cell membranes. Nevertheless, they simply cannot be seen on electron micrographs, where the membranes appear as smooth as angels' cheeks. The main evidence for belief in them is that transmitters and drugs act at extremely low concentrations.

> *Responses: The only explanation for their apparent absence in electron micrographs that has been offered is that they must have moved during the preparation for electron microscopy. It is normally assumed that if a transmitter or a drug acts, it nearly always binds to a receptor, the majority of which are found to be located in the microsomal fraction. This is believed to contain the cell membranes and the endoplasmic reticula. By the way, has anyone seen a microsome?*

Another explanation is that the receptors move from their original sites in the cell membrane to other parts of the cell, during the preparation for electron microscopy. If this explanation were accepted, it would mean that electron microscopy was unsuitable for detecting the locations in life of any small structures in tissues.

Conclusions: It must be concluded that receptors as structures and sites, simply do not exist in living cells. Elsewhere, I have put forward a different simpler hypothesis for the action of transmitters and drugs (H. Hillman, 1991).

> *"It has been previously shown that the anatomical synapse does not exist in the living central nervous system, and that receptors are unlikely to be unique molecules sited on particular locations in or on the cell membrane.*
> *These conclusions and the rapidity of action of intravenously administered substances necessitated the adumbration of a new electrical hypothesis for the mechanism whereby signals pass from one part of the brain and spinal cord to another.*
> *Nevertheless, there is overwhelming evidence that signals do pass from one part of the central nervous system to another in the living animal.*
> *Therefore, serious reservations about important elements of current views induce an obligation to formulate alternative, testable hypotheses." - Dr H. Hillman, Unity Laboratory of Applied Neurobiology, University of Surrey, in "A new hypothesis for electrical transmission in the mammalian central nervous system", Medical Hypotheses, 1991.*

Golgi Body

Golgi, (1898), described the appearance of this body, as a consequence of staining neurons of brown owls with silver salts, and it was subsequently seen in most other stained and unstained cells. It was later also identified in electron micrographs of cells, but it was not appreciated that the appearances, shapes and dimensions, seen by light microscopy, were completely different from those seen by electron microscopy (Hillman, 1978). In the early 20th century, any structure or particle seen in the cytoplasm of stained cells, was called a 'Golgi' body. Other than ourselves, no author has commented on the discrepancies between the light and electron microscopy.

> *Responses: In the early literature, there are many drawings of Golgi bodies by dark ground illumination and in stained tissue.*

Conclusions: I have seen no modern micrographs of living cells, for example, in culture, showing these structures. I believe that the failure to see the Golgi bodies in living cells means that they do not exist in life.

Lysosomes

These cannot be seen in unfixed cells or in cells in tissue culture.

The movements of particles injected into the cytoplasm do not appear to be obstructed by such bodies, which are believed to be about the same size as nuclei.

Their existence originated from experiments on subcellular fractionation, in which a certain fraction was found to be rich in acid hydrolytic enzymes.

The latter finding does not bear on the question of whether the structures exist in the living intact cells.

> *Responses: Lysosomes sometimes appear as vacuoles adjacent to injected substances, and, sometimes, as granules. It is an open question whether the two different kinds of lysosomes represent the same structure.*

Conclusions: I do not think that one that can conclude that lysosomes exist, until and unless, they can be shown in living or unfixed cells.

Peroxisomes

> *Responses: The same remarks apply to peroxisomes as to lysosomes.*
>
> *The fraction of peroxisomes contains a different selection of enzyme activities than do the lysosomes.*

Conclusions: Although it is a widespread practice, one cannot describe the 'function' of a fraction, and believe that that function which one has attributed to it, justifies its existence as a structure, because of the complex chemical procedure which must be used to separate it. The peroxisomes are also artefacts, for the same reasons as the lysosomes are.

Cell Biology and Neurobiology - Unknowns and Uncertainties

- The shapes and dimensions of cells and organelles can not be determined by histological, electron microscopical, histochemical, or immunocytochemical, techniques, since all of them involve dehydration of the tissues, which causes them to shrink, because the tissues themselves contain 60% to 90% water. Some biologists feel that the reagents used in the procedures restore the cell volumes to their states in the living tissues, but the evidence is against this.. The only solution to this problem is to look at unfixed and unstained tissues by light microscopy, or to work on functioning isolated organs.

- Many apparent structures seen in stained tissues by light or electron microscopy, are small and amorphous, so that their shapes and dimensions cannot be known for certain. Therefore, a number of vague graphic terms are used to describe them; these include: deposits, vesicles granules, secretions, specialisations, Golgi apparatuses, lysosomes, peroxisomes, ribosomes, synapses, and synaptic vesicles.

- The chemistry of necrosis is not known.

- If receptors do not exist, those who previously believed that they do, should put forward a new hypothesis for the actions of transmitters, drugs, hormones, enzymes and toxins.

- A new theory of transmission of signals from one part of the nervous system to another needs to be preferred, in view of the problems with the chemical theory. I have proposed a new theory (Hillman, 1991).

Questions Addressed to Cell Biologists

In Hillman (2003), I listed a number of crucial questions not answered by the cell biologists and the neurobiologists. Hardly any of them have been answered. I have now refined some of the earlier questions and added some new ones.

- What is biology and how does it differ from molecular biology and from the chemistry of living tissues?

> *Responses: Molecular biology is another name for the chemistry of the living tissues. Most biologists and biochemists regard the chemistry of dead, fixed, dehydrated, frozen, homogenised, centrifuged, or extracted tissue, as yielding valuable information about the chemistry of life.*

Conclusions: I would put a different emphasis on the problem. It seems to me that our aim must be to study the processes in the living animal, because the more we subject it to reagents and manipulations, the more distant it becomes from living processes. I believe that most biologists are not as concerned as they should be about what their procedures do to living animals and plants, and that many of their findings are artefacts resulting from their own manipulations.

- Why do most biologists believe that electron microscopy gives a more accurate image of the structures of the cells than does light microscopy?

> *Responses: The electron microscope has a higher magnification than the light microscope and they believe that a heavy metal deposit on a dead tissue, gives more accurate information than observing living cells directly by light microscopy.*

Conclusions: This seems very unlikely in view of the fact that electron microscopists are looking at deposits of salts of heavy metals on dead tissue. The preparation for electron microscopy includes fixing the tissue, dehydrating it, and subjecting it to a number of toxic and unnatural reagents.

- How relevant is the chemistry of dead, fixed, or disrupted, tissues to our knowledge of living systems?

Responses: One can learn a great deal about the biology of systems using histology, histochemistry, electron microscopy, immunocytochemistry and fluorescence microscopy.

Conclusions: Not about the structure and chemistry of living cells.

- Why has there been so much resistance to the study of the nuclei and the nucleoli of unfixed tissues by light microscopy?

Responses: Electron microscopy gives one greater magnification.

Conclusions: The tissue has to be treated with so many powerful chemicals during the staining, and these can cause artefacts.

- Why are not receptors, transporters, carriers, and transport enzymes, which are believed to be macro-molecules, not seen by electron microscopy in the cell membranes?

Responses: No explanation has been offered for this.

Conclusions: The simplest explanation is that none of these macromolecules exist within, or on the surface of, cell membranes.

- Why have the neuroglial cells which modern neurochemists identify by markers not been shown to be the same cells as those stained by classical neuroglial stains?

Responses: This question has not been raised before, although the markers are usually found in tissue cultures, and the stains are used for whole nervous tissue.

Conclusions: It is possible that these types of experiments have been carried out, but have not been published. Astrocytes and oligodendrocytes do not exist in life.

- Why is it so difficult to find astrocytes or oligodendrocytes in unfixed central nervous tissue or in stained sections of healthy tissue?

Responses: This question does not seem to have been raised before.

Conclusions: These two types of neuroglial 'cells' simply do not exist in the living central nervous system. The neuroglia is a syncytium mainly of mitochondria and naked nuclei, as originally envisaged by Virchoff, (1846). In the literature, these types of cells are usually represented by drawings or diagrams.

- Why are the dimensions and numbers of synapses very different by light and by electron microscopy?

Responses: This point has been ignored.

- Why are presynaptic fibres, which are widely illustrated in neurobiology books and papers not been seen in histological sections, (Copestake and Hillman, 2013)?

Responses: Physiologists, histologists, and neurobiologists believe them to be present.

Conclusions: They are not." - Dr Harold Hillman, Unity Laboratory of Applied Neurobiology, in "A Serious Indictment of Modern Cell Biology, and Neurobiology", Semantic Scholar, 2013.

"The key to being an Expert is to complicate the simple." *- Michigan Education*

Pseudo-Science and Historical Understanding

"In the English language, the word "science" is usually applied only to the natural sciences.

In the natural sciences knowledge comes from experiment; a fact is something experimentally established.

The theory of a natural science must conform to these experiments; they must never contradict such an established fact.

Should they contradict such a fact, a new explanation must be sought.

In the field of nature we have no knowledge of final causes.

We do not know the ends for which some "power" is striving.

Some persons have attempted to explain the universe as if it had been intended for the use of man. But questions can then be raised: What is the value to man of flies, for instance, or of germs? **In the natural sciences we know nothing but experience.** We are familiar with certain phenomena and on the basis of experiments a science of mechanics has been developed. **But We Do Not Know what Electricity Is.**

We don't know why things happen the way they do; we don't ask.

And if we do ask, we don't receive an answer. To say we know the answer implies that we have ideas of "God." To assert that we can find the reason implies that we have certain "God-like" characteristics.

The French physiologist Claude Bernard said in his book on experimental science that life itself is something "ultimately given"; **biology can only establish the fact that there is such a phenomenon as life, but it can say nothing more about it. In the natural sciences, the establishment of experimental facts does not depend on the judgment of individuals. Nor on the idiosyncrasies, or individuality, of the specific scientist. A judgment in the field of human action is coloured by the personality of the man doing the understanding and offering the explanation. I do not speak of biased persons, nor of those who are politically partial, nor of persons who attempt to falsify facts."** - Ludwig von Mises in "The Free Market and Its Enemies: Pseudo-Science, Socialism, and Inflation", Mises Lectures, 1951.

The Contagious Farce

> ***"Cases of Variola are yet being found in certain districts of the city. In most cases the patients become startled when told that they are suffering from Smallpox.*** *Most of those affected have been Afro-Americans.* ***What is now puzzling many is that the hospital for infectious diseases is in an overcrowded condition,*** *and should a severe epidemic break out it would be a question as to where the patients could be properly isolated." - Journal of the American Medical Association, 4 November 1899.*

Please Read:

1. "DNA Discovery, Extraction and Structure: A Critical Review", 2021.
2. "The Elusive 100 Year Search for the Missing "Viruses", Or The Farce And Fraud of Virology Explained in Detail", 2024.

The Medical Trade Transmission Farce

> *"Our review found No Human Experimental Studies published in the English-language literature delineating person-to-person Transmission of influenza." - in "Transmission of Influenza: Implications for Control in Health Care Settings", Clinical Infectious Diseases, 15 October 2003.*
>
> *Rigorous human trials conducted by the U.S. Navy, Failed To Prove Influenza direct airborne contagion, the results where published by Dr Milton J. Rosenau, MD, in "Experiments to Determine Mode of Spread of Influenza", Journal of the American Medical Association", 2 August 1919.*

All 5 Studies Failed To Support Sick-To-Well Transmission

"There were 5 attempts to demonstrate sick-to-well influenza transmission in the desperate days following the pandemic 1918 Flu and all were "Singularly Fruitless", all 5 Studies Failed to support sick-to-well transmission, in spite of having numerous acutely ill influenza patients, in various stages of their illness, carefully cough, spit, and breathe on a combined total of >150 well patients." - in "On the epidemiology of influenza", The Virology Journal, 25 February 2008.

The 1918 Flu Could Not Be Transferred Under Experimental Conditions

"It seemed that what was acknowledged to be one of the most contagious of communicable diseases 1918 Flu Could Not Be Transferred under Experimental Conditions. Many vaccines were developed and used during the 1918–1919 pandemic. The medical literature was full of Contradictory Claims of their success; there was apparently No Consensus on how to judge the reported results of these Vaccine trials. The result of the Vaccine Controversy was both a further waning of confidence in Pfeiffer's bacillus as the agent of influenza." - in "The state of science, microbiology, and vaccines circa 1918", Public Health Reports, Journal of the Office of the U.S. Surgeon General, U.S. Public Health Service, April 2010.

Influenza Virus in Human Volunteers Experiment Was A Failure

"Although so far as its primary object was concerned this experiment was a failure." *- The Results of Intranasal Inoculation of Modified and Unmodified Influenza Virus Strains in Human Volunteers", The Medical Journal of Australia, 1 December 1940.*

There Is No End To The Absurdities Connected With Communication of Disease

"And now, what does "contagion" mean? It implies the communication of disease from person to person by contact. There Is No End To The Absurdities Connected With This Doctrine.

There Is Any Such Thing As Contagion

Suffice it to say, that in the ordinary sense of the word, there is no proof, such as would be admitted in any scientific inquiry, that There Is Any Such Thing As "Contagion."

The history of the Doctrine of "Contagion" is given by Dr Adams in his very learned translation of "The Seven Books of Paulus Ægineta", Vol. I, p. 284, Sydenham Society, 1844.

He says, in his comment:

> *"The earlier ancient authors appear to have entertained no suspicions of contagion as a cause of febrile or of other complaints. The works of the fathers of history, and of medicine, have likewise been ransacked in vain for any traces of the doctrine of contagion."*

Dr Adams states, in regard to plague, a disease which, in later times, has been considered as the very type of all "contagious" pestilences."

> *"The result of our investigations into the opinions of the ancients on this subject leads us to the conclusion that all, or at least the most intelligent of the medical authorities, held that the plague was communicated not by any specific virus, but in consequence of the atmosphere around the sick being contaminated with putrid eflluvia."*

Contagions Doctrine Is Modern Invention: Injurious to Civilization and Humanity, From the Loss of Life, and the Immense Tax Upon Commerce

The obvious practical result of this view of infection is, that abundance of pure air will prevent infection. All my own hospital experience confirms this conclusion. If infection exists, it is preventable.

If it exists, It Is the Result of Carelessness or of Ignorance.

"Contagion" as a Doctrine, on which distinct practical proceedings have been taken, appears to be of very modern invention; but it has been not the less injurious to civilization and humanity, from the loss of life which has from time to time followed from the practices which it inculcates, and from the immense Tax which it has entailed upon Commerce.

Small-Pox Cow-Pox These Are Not Contagions

Small-Pox, Cow-Pox, etc... But these are not "contagions" in the sense supposed.

The word "infection", which is often confounded with "Contagion", expresses a fact, and does not involve a hypothesis.

But just as there is no such thing as "Contagion", there is no such thing as inevitable "Infection." Infection acts through the air. Poison the air breathed by individuals and there is infection.

Tribe of Hospital-Generated Epidemic Diseases

Shut up 150 healthy people in a Black-hole of Calcutta, and in 24 hours an infection is produced so intense that it will, in that time, have destroyed nearly the whole of the inmates. Sick people are more susceptible than healthy people ; and if they be shut up without sufficient space and sufficient fresh air, there will be produced not only Fever, but Erysipelas, Pyaemia, and the Usual Tribe of Hospital-Generated Epidemic Diseases.

Again, if we have a fever hospital with over-crowded, badly-ventilated wards, we are quite certain to have the air become so infected as to poison the blood not only of the sick, so as to increase their mortality, but also of the medical attendants and nurses, so that they also shall become subjects of fever.

It will be seen at a glance, that in every such case and in every such example, the "infection" is not inevitable, but simply the result of carelessness and ignorance. As soon as this practical view of the subject is admitted and acted upon, we shall cease to hear of hospital contagions.

In certain hospitals it has been the custom to set apart wards for what are called "infectious" diseases, but in reality there ought to be no diseases so considered. With proper sanitary precautions, diseases reputed to be the most "infectious" may be treated in wards among other sick without any danger. Without proper sanitary arrangements, a number of healthy people may be congregated together so as to become subject to the worst horrors of "infection."

No stronger condemnation of any hospital or ward could be pronounced than the simple fact that any zymotic disease has originated in it, or that such diseases have attacked other patients than those brought in with them.

And there can be no stronger condemnation of any town than the outbreak of fatal epidemics in it. Infection, and incapable management, or bad construction, are in hospitals as well as in towns, convertible terms.

It was necessary to say thus much to show to what hospital diseases are not necessarily due. To the following defects in site, construction, and management, as we think, they are mainly to be attributed. The agglomeration of a large number of sick under one roof. It is a well-established fact that, other things being equal, the amount of sickness and mortality on different areas bears a ratio to the degree of density of the population.

All experience tells the same tale, both among sick and well. Men will have a high rate of mortality in large barracks, a low one in separate huts, even with a much less amount of cubic space. If overcrowding or its concomitant, bad ventilation, among healthy people, generates disease, it does so to a far greater extent among the sick in hospitals.

Deficiency of Ventilation

The want of fresh air may be detected in the appearance of patients sooner than any other want. No care or luxury will compensate indeed for its absence.

Unless the air within the ward can be kept as fresh as it is without, the patients had better be away. This large quantity, if not speedily carried away, would undoubtedly be injurious to health; but there are other gaseous poisons produced with the carbonic acid which have still greater power to injure.

Every adult exhales by the lungs and skin 48 ounces, or 3 pints of water in 24 hours; 16 men in a room would therefore exhale in 8 hours 16 pints of water, and 123 cubic feet of carbonic acid into the atmosphere of the room.

With the watery vapour there is also exhaled a large quantity of organic matter, ready to enter into the putrefactive condition.

This is especially the case during the hours of sleep, and as it is a vital law that all excretions are injurious to health if reintroduced into the system, it is easy to understand how the breathing of damp foul air of this kind, and the consequent re-introduction of excrementitious matter into the blood through the function of respiration will tend to produce disease.

If this be so for the well, how much more will it be so for the sick?

For the sick, the exhalations from whom are always highly morbid and dangerous, as they are one of nature's methods of eliminating noxious matter from the body, in order that it may recover health. One would think that the first and last idea in constructing hospitals would be to contrive such means of ventilation as would be perpetually and instantly carrying off these morbid emanations.

One would think that it would be the first thing taught to the attendants to manage such means of ventilation. Often, however, it is not even the last thing taught to them.

Deficiency of Light

Second only to fresh air, however, I should be inclined to rank light in importance for the sick. Direct sunlight, not only daylight, is necessary for speedy recovery, except, perhaps, in certain ophthalmic and a small number of other cases. Instances could be given, almost endless, where, in dark wards or in wards with a northern aspect, even when thoroughly warmed, or in wards with borrowed light, even when thoroughly ventilated, the sick could not by any means be made speedily to recover.

The effect of light on health and disease has been ably discussed in an article on Light:

> *"The influence of light upon vegetable life has been long and successfully studied. Researches have placed it beyond a doubt, that the rays of the sun exert the most marked influence on the respiration, the absorption, and the exhalation of plants, and, consequently, on their general and local nutrition.*
>
> *Dr Priestley tells:*

"It is well known that without light no plant can thrive ; and if it do grow at all in the dark, it is always white, and is in all other respects in a sick and weakly state."

He is of opinion that healthy plants are in a state similar to sleep in the absence of light, and that they resume their proper functions when placed under the influence of light and the direct action of the solar rays.

Hunt obtained the following interesting results:

1. Light prevents the germination of seeds.
2. The germination of seeds is more rapid under the influence of the chemical rays, separated from the luminous ones, than it is under the combined influence of all the rays, or in the dark.
3. Light acts in effecting the decomposition of carbonic acid by the growing plant.
4, The chemical rays and light (or all the rays of the spectrum visible to a perfect eye) are essential to the formation of the colouring matter of leaves.
5. Light and the chemical rays, independent of the rays of heat, prevent the development of the reproductive organs of plants.
6. The radiations of heat, corresponding with the extreme red rays of the spectrum, facilitate the flowering of plants, and the perfecting of their reproductive principles.

The very curious fact of plants bending towards the light, as if o catch its influence, must have been frequently observed. Mr Hunt found that, "under all ordinary circumstances, plants, in a very decided manner, bent towards the light"; and, what is exceedingly interesting, when the light employed was red, from passing through red fluid media, the plants as decidedly bent from it. The property of bending towards the light is strikingly exhibited by the potato; and it has been found that the yellow or most luminous rays are most efficacious in producing this movement, while the red rays, as before, produce a repulsive effect. We come now to consider the influence of light upon the human frame, physical and mental, in health and disease, in developing the perfect form of the adult, and in preserving it from premature decay. It is well known to all who are obliged to seek for health in a southern climate, that an ample share of light is considered necessary for its recovery. In the years of cholera, when this frightful disease nearly decimated the population of some of the principal cities in the world, it was invariably found that the deaths were more numerous in narrow streets and northern exposures, where the salutary beams of light and actinism had seldom shed their beneficial influences. The resistless epidemic found an easy prey among a people whose physical organisation had not been matured under those benign influences of solar radiation which shed health and happiness

> *over our fertile plains, our open valleys, and those mountain sides and elevated plateaus where man is permitted to breathe in the brighter regions of the atmosphere. Dr Edwards, maintains that in: "the exposure of the whole surface of the body to light will be very favourable to the regular conformation of the body."*
>
> *In support of this opinion, he quotes a remarkable passage from Baron Humboldt's "Travels to the Equinoctial Regions of the New Continent", 1814. "Both men and women are very muscular; their forms are fleshy and rounded. It is needless to add, that I have not seen a single individual with a natural deformity"." - in "Researches on Light; Sanatory, Scientific, and Aesthetica", North British Review, August 1858.*

Charles Darwin visited Tahiti in November 1835 as the naturalist aboard HMS Beagle. In his travelogue:"The Voyage of the Beagle", written during his 1835 visit to the isolated, indigenous population of Tahiti, the Island was one of the destinations dictated in the Admiralty's orders. Darwin described the striking physical health and uniform athleticism of the Polynesian people, hospitable, and intelligent, observing how nutrition influenced their robust, fleshy, and rounded builds, a physique supported by an active lifestyle and a natural diet.

> *"In my opinion, they are the finest men I have ever beheld; very tall, broad-shouldered, athletic, with their limbs well proportioned. Hospitality is here universal. I entered many of their houses & everywhere received a merry pleasant welcome." - Charles Darwin, in "The Voyage of the Beagle", 1839.*

The Very Great Importance of Hygiene

The fatal zymotic diseases fever and cholera, it will be seen that these two diseases occasioned nearly 50% of the total mortality among the nursing staff as against 16% among the Loudon female population. This single fact is quite enough to prove The Very Great Importance of Hygiene." - Florence Nightingale, in "Note on Hospitals: Being 2 papers read before the National Association for the Promotion of Social Science, at Liverpool, in October, 1858: with evidence given to the Royal Commissioners on the state of the army in 1857", 1858.

The Small Pox Contagion Farce

"On Monday, 21 January 1901, about 11.30 AM, I entered the residence of Mr. where Miss Stark was confined with the Smallpox.
As I entered the house Mr. jumped from his chair and said:

"We are not allowed to let anyone enter this house."
I stated that I came to see the smallpox patient.

"There she is", he said, pointing towards a young woman, in a far corner of the room. Mrs. sat by the window sewing, while a child about 2 years old ran about the room.

"Are you not afraid of taking smallpox from the girl?" I asked.

"No", replied the mother "we are not afraid."

"But the Doctors say this disease is very contagious; are they not very careless and negligent in not keeping this patient away from the rest of the family? This is a genuine case of Smallpox, just see the large pustules full of pus. Of course I know you can't take the disease from another."

Then to show them that this was true, I broke open several of the large pustules on her face and arms and took the pus out of them and smeared it all over my face, hands, beard and clothes, and at the same time remarked that I would now go home to dinner.

I mentioned nothing of the affair to my family during the meal, and went directly to my office. The first person who came in the office was an old friend, Rev. T., who has a parish at North Milwaukee. We shook hands heartily; in fact, I had entirely forgotten that I was covered with smallpox poison.

I presented him with one of my books, and according to our Scientific and Wilful Deceivers of the Public (Medical Doctors), I must have covered the book and gentleman with "Smallpox Germs", and he in return must have exposed many people in Appleton, those he met on the train, and finally his whole congregation.

The germs on the book, I suppose, are still enjoying themselves in the spiritual home of the reverend gentleman. During the same afternoon I touched the faces of several persons in my office while treating their eyes and fitting glasses.

From 4 to 6 and from 8 to 10 o'clock the same afternoon, I was at the Business Men's Club, where I mingled and played cards with the members.

In the evening the conversation drifted to the Smallpox case I had visited in the morning. After discussing the subject for a while, one of them asked me if I would visit a Smallpox patient, and then go home to my family. I quietly remarked that I would just as soon do it as visit a patient with a Common Cold.

I knew the sentiment of these gentlemen, and I also had too much respect for them and myself, to impose upon their feelings, even if I did know that their belief was a foolish superstition.

I have done similar acts dozens of times during the past 15 Years and have in each instance watched the results and not the slightest harm has ever been done to anyone. The Sanctimonious Frauds and Deceivers of the Public (Medical Doctors) tried in every way, shape and manner, to trace a case of Smallpox to my actions, but With no avail.

Even after I had exposed 50,000 people, and rubbed my pus-covered hands over 37 faces, they could find nothing against me.

In the near future I will publish a few similar incidents which have happened to me the past years, which are far more interesting than this one.

Why is not one out of the thousands of these Medical Deceivers, ever turned up to win the prize which reads as follows: "$1,000 Dollars will be given to anyone who can prove that disease is contagious"; also "$10 Dollars for each day it takes him to prove it." The Doctors know that by superstition the people can best be held." - Dr Matthew Joseph Rodermund, MD, Ophthalmologist, Appleton, Wisconsin, in "The Vaccination Superstition", 1902.

> *"Dr Rodermund, the Physician who, to support his theory that the disease is non-contageous, deliberately exposed himself to the Smallpox Contagion in this city, broke quarantine Saturday evening about 7 o'clock, eluded 4 officers, and, aided by H. W. Rathbun, Principal of the Appleton School of Business, drove 40 miles to Waupaca, and boarded a train to Chicago. Rathbun returned here today, was arrested and put in the pest house." - in "Dr Rodermund Escapes; Man Who Caused Smallpox Scare Gets Away from Appleton", The New York Times, 28 January 1901.*

The Contagion of Yellow Fever Farce

"The Propagation of Yellow Fever.

Prior to the time at which the foregoing observations were made the Commission had already turned its entire attention to the possible solution of the problem of the propagation of yellow fever, being

induced thereto, not only by the fruitlessness of the investigations made thus far along bacteriological lines, but, also, by reason of certain facts which seemed to call for a better interpretation than had hitherto been accorded them.

In the first place, the Commission saw, with some surprise, what had so often been noted in the literature, that patients in all stages of Yellow Fever could be cared for by non-immune nurses without danger of contracting the disease.

The non-contagious character of yellow fever was, therefore, hardly to be questioned.

In the second place, it had been observed that patients discharged from the wards during early convalescence could be brought into intimate association with non-immune individuals without thereby establishing fresh foci of the disease.

This did not seem to indicate that any specific agent was present in the excreta of the sick.

Again, it had been noted that in certain cases of this disease no growth had been obtained on the ordinary laboratory media, either by frequent cultures from the blood during life or from the blood and organs after death." - Dr Walter Reed, MD, Surgeon, U.S. Army, president of the commission, in "Recent researches concerning the etiology, propagation, and prevention of Yellow Fever, by the united states army commission", Journal of Hygiene (London), 1 April 1902.

Epidemiologist Reluctantly Accept The Concept of Contagion

“Dr Karl F. Meyer, PhD, Hooper Foundation for Medical Research, University of California – The experiences reported by Dr J. C. Geiger, coincide with those recorded in the international literature. In fact, the extreme rarity of sister infections, even in the vicinity of definite cases in a family, is so striking that the epidemiologist reluctantly accepts the concept of contagion for the disease poliomyelitis.

Nobody will deny that the direct transfer of the virus from person to person is debatable, and for various reasons:

1. The infectiousness of the nasopharyngeal secretions of monkeys is fully proved, but well monkeys caged with poliomyelitic animals, or laboratory workers exposed to these apes, do not contract the disease.

2. In contrast to the droplet-borne infections diphtheria and scarlet fever-the incidence of carriers is very low. An extensive spread of the specific disease agent in poliomyelitis has not as yet been proved. Lack of connection between cases of this disease is a constant epidemiologic feature; it is very difficult-usually impossible to establish well-defined chain transmissions. This state of affairs is usually explained by the statement that the contacts are nonsusceptible.

Doctor Geiger feels keenly his inability to trace the sources or pathways of poliomyelitic infection. Everybody shares in this disappointment. An effective system of prevention cannot be instituted until the modes of transmission are established. The administrative measures in vogue are empirical and, consequently, ineffective.” - Dr Karl F. Meyer, PhD in “Acute Anterior Poliomyelitis: The Possibility of The Spread as A Result of Direct Personal Contact: A Study of 385 Contacts”, California and Western Medicine, April 1938.

There Is No Record of One Monkey Catching The Infection From Another

“Dr Karl F. Meyer, PhD, Hooper Foundation for Medical Research, University of California - That is a difficult question to answer directly, since we are still baffled by the simple question: “What is the disease agent in infantile paralysis?”

We cannot isolate it like a germ in a test tube, and it is too small to be seen with a microscope. There Is No Record of One Monkey Catching The Infection From

Another monkey by exposure. Many tests have been made to develop a vaccine, but the outlook is not very promising.

Dr J. C. Geiger, Director of Public Health, San Francisco - Of What Does the Treatment Consist?

Treatment

Dr R. W. Burlingame, MD - The general treatment consists of bed Rest and Cleanliness.

After-Treatment

Dr J. C. Geiger - We hear much about the value of swimming pools and baths for the after-treatment. Will you explain something about the application of Hydrotherapy ?

Dr R. W. Burlingame, MD - The buoyancy of the water allows weak muscles to perform their function more easily than is possible otherwise." - in "Experimental Research Concerning Polio Myelitis", California and Western Medicine, July 1939.

Evidence of Contagiousness Was Not Established

"The fact that an extensive epidemic of poliomyelitis was prevailing in the states of New York and Massachusetts in 1907, aroused the suspicion that the disease was infectious and communicable; it was therefore incorporated into the Public Health Law as such. However, Conclusive Evidence of Contagiousness Was Not Established during that epidemic Nor in subsequent ones. Moreover Conclusive Evidence of Contagiousness was Not Established in 1949 during the greatest epidemic of poliomyelitis in recorded history, as shown by the records of the U.S. Public Health Service, and the New York State Department of Health.

Failure To Prove Contagiousness

Time Magazine, commenting on these surveys, points out how, when and where people catch polio remained a mystery.

It Has Been Impossible To Prove Contagiousness in Human or Animals

In addition to the Failure To Prove Contagiousness of Human Poliomyelitis, It Has Likewise Been Impossible To Prove Contagiousness of Poliomyelitis in expertmental Animals." - Dr Ralph R. Scobey, MD, in "The poison cause of poliomyelitis and obstructions to its investigation", Archives of Pediatry, April 1952.

In County Contagious Hospital Wearing Face Masks Is Optional If Is A Contagious Disease It Is Strange Indeed That No One Ever Contracted Poliomyelitis

"But we may ask is poliomyelitis actually contagious? During a period of 40 years there has never been a student nurse, nor any one else associated with Cook County Contagious Disease Hospital who has ever contracted poliomyelitis. In County Contagious Hospital, where, it may be mentioned, the wearing of face masks is optional. If poliomyelitis is a contagious disease as first maintained by Wickman about 1905 it is strange indeed that no one ever contracted it at County Contagious Hospital. Moreover if there should be such an occurrence it would be no proof that the disease was acquired within the hospital. Knowledge in respect to the epidemiology of poliomyelitis has made no progress of practical value since Wickman in 1905 maintained that the disease was spread by human carriers. But quarantine and isolation of patients have had no decernable effect in the control of epidemics. Moreover poliomyelitis thrives during warm dry seasons. As we are fully aware there is no specific remedy for Poliomyelitis." - Dr Archibald L. Hoyne, MD, in "The Poliomyelitis And Hospitalization", The Illinois Medical Journal, August 1954.

Limited Evidence And No Human Experimental Studies Published on Person To Person Transmission of Influenza

"Although droplet transmission is thought to be the primary mode of influenza transmission, Limited Evidence Is Available To Support the relative clinical importance of contact, droplet, and droplet nuclei (airborne) transmission of influenza. Our Review Found No Human Experimental Studies Published in the English-language literature delineating person-to-person Transmission of Influenza." - in "Transmission of Influenza: Implications for Control in Health Care Settings", Clinical Infectious Diseases, 2003.

"The all-surrounding heaven, the Vital Air, Is big with death: and tho' the putrid south Be shut, tho' no convulsive agony, shake from the deep foundations of the world. The imprisoned plagues, a secret venom oft corrupts the air, the water, and the land selfioning What livid deaths has sad Byzantium seen! How oft has Cairo, with a mother's woe, non erit Wept o'er her slaughtered sons, and lonely streets! Even Albion, girt with less malignant skies, fotimsh Albion the poison of the Gods has drank." *- John Armstrong, Scottish physician, in "The Art of Preserving Health", 1744.*

Epidemic Diseases Are Not Contagious

"It is certain that Epidemic Diseases Are Not Contagious, because there Is No Proof That They Are. The Absence of Evidence Completely Irresistible, on this subject, is itself sufficient proof that There Is No Evidence Whatever. For, were "Epidemic Diseases" really propagated by contagion, it could not possibly be a matter of controversy: the facts establishing the truth would be so clear, so numerous, so overwhelming, as to place it beyond all question. Epidemic Diseases Are Not Contagious Because the Human Race Continues To Exist. Were these maladies really capable of spreading by contagion, mankind must long since have been exterminated. To the devastation of acute contagious diseases, nature has set limits by rendering them capable of affecting the same person once only; but epidemic diseases are capable of affecting the same person repeatedly; and, in point of fact, the same person is often attacked, several times successively, by the same disease during the prevalence of the same epidemic. Were such a disease capable of propagation by contagion, it is obvious that it would be impossible to set any bounds to its ravages. Every person in health who came within a certain, distance of the diseased would become affected; these would communicate it to others; as the disease spread no person in society could long continue beyond the sphere of its influence; the separation of the healthy from the sick would be impossible; no one could remain healthy, because even those who had had the disease would be again and again seized by it. Whilst a single individual of the community remained alive, it could never cease. Had the contagion of the small-pox been capable of affecting the same person repeatedly, no precautions could possibly have prevented it from being in a state of constant circulation; wherever it once broke out it would never disappear so long as there was a healthy person to be seized. Fortunately for the human race Epidemic Diseases Do Not Thus Spread; do not thus perpetuate their devastation. Even in the places and the seasons in which they exert their most powerful and malignant influence, the number of individuals is always small compared with the bulk of the community which remains unaffected; and, as has been already stated, it is precisely at the period when the greatest number are attacked, and when the greatest number perish, that is, when the contagious influence, if it really existed, must be most extensive and most active, that these maladies rapidly decline and suddenly cease. This fact, as has been already shown, is utterly incompatible, and is acknowledged to be so, with the property of contagion: it is alone decisive of the question. But it will be asked, how could diseases so dissimilar and so opposite, have been confounded? How can medical men in particular have fallen into the delusion, and why do they continue to be misled by it? Mr. Playfair of Edinburgh, a military surgeon to Dillon's Regiment (the famous Irish Brigade in the service of France) during their deployment in Gibraltar in the late 18th century, records, the following very important and illustrative fact:

> ***"That even after removal to the camp, in the governor's meadow, while the men of Dillon's Regiment were allowed to enter the town, on fatigue duty, the fever still continued to prevail; but that from the day of their confinement to the neutral ground, they were quite free from it, although they had equal intercourse, with the inhabitants coming from town in which the disease was at that lime very destructive. And Mr. Amiel states that, no individual labouring under epidemic fever, on being removed to a pure and ventilated place, such as the neutral ground or Europa point, ever communicated the disease to those in the closest contact with him."*** *- Mr. Playfair of Edinburgh, military surgeon to Dillon's Regiment, in his official replies (Burnet, p. 437)*

It Never Spreads

There are proofs of the same thing on as large a scale as can be desired. Mr. Green states in the Committee of the House of Commons, that if the plague exist at Constantinople and not at Smyrna, and persons affected with the plague go down from Constantinople to Smyrna, although they die there, the plague does not spread at Smyrna; and vice versa; that whenever it is carried into a place in which it does not exist, It Never Spreads. Sir Robert Wilson, in the Committee in the House of Commons, states, that while in Egypt he saw many cases of plague; that that part of the army, Turkish and British, which moved against Cairo, passed through the country where numerous villages were infected with the plague.

> ***"- I Believe you have been in Egypt? - Yes, with the army: While in Egypt with the army, have you seen any cases of plague there? - Many; and if you will allow me, I will state the result of my observations. The Indian army, passing through Upper Egypt, had traversed a country in which 60,000 inhabitants were said to have perished, whole villages having been destroyed; but yet the troops of that army brought no infection with them; nor were any precautions adopted to prevent contagion on their junction with the British European army. To these circumstances. I was myself an eye witness. I wish to state, that as we moved through the country the inhabitants pointed out to us particular villages that were infected with the plague, and which plague did not extend out of those particular villages to any of the contiguous villages, although there was no precaution whatever used as to the communication with the inhabitants of the infected villages. Conversing with Dr Desaguettes, the chief physician of the French army, and M. Assilmi, the head surgeon of the French army. they assured me that, whenever a battalion, infected with the plague, had been marched out of the infected place, the soldiers recovered, and never conveyed the infection to other garrisons; and that troops marching into that infected garrison which had been vacated, did not become themselves affected, unless they remained there longer than 8 or 10 days. The villages are insulated, and built on parallel lines,***

> ***not more than 500 yards asunder; and though 6 or 7 of those villages in one district may be affected with the plague, and though the inhabitants of those infected villages constantly pass through villages not infected, on their route to the Nile, yet though there is such a daily traverse and communication, the infection will remain in the villages where it broke out, and not extend infection through the district."*** *- Sir Robert Wilson, a Member of the House, called in and Examined, "On the Doctrine of Contagion in the Plague", Selection of reports and papers of the House of Commons, 29 April 1819.*

Now we do affirm, that if a man were to set himself to invent proof, that any given disease is not contagious, he could, by no effort of the imagination, suggest proof more precise, more complete, more overwhelming than that which is afforded by this narrative. It cannot be necessary to multiply testimonies: many others are on record, and might easily be cited ; but without advancing another argument of any kind on this subject, we would merely put to any man of candour the following question: Suppose what we contend for to be true; suppose that the plague is really not contagious; suppose that this were a truth fully ascertained, and universally admitted, what proof could there be of it; what evidence is it possible to conceive which we do not possess? The disease obeys every law of an epidemic; it does not obey a single law of a contagious disease; it is not communicated by wearing clothes impregnated with the sweat, pus, and ichorous matter from the bodies of those who have died of the malady; it is not communicated by sleeping in the uncleansed beds of those who have perished of it; it is not communicated by coming into the closest possible contact with their living body; it is not communicated by sleeping in the same bed with them; the husband who dies in the arms of his wife communicates it not to her; sister communicates it not to sister; the child deriving sustenance from the breast of its mother, who is perishing, and who does perish by it, receives it not; the sick who fly for succour to a purer air, impart it not to the inhabitants of these more favoured places; whole armies continue in unrestrained and constant intercourse, with affected towns and villages, without receiving it in a single instance." - Dr Charles Maclean, MD, in "Results of an Investigation respecting Epidemic and Pestilential Diseases, including Researches in the Levant concerning the Plague", 2nd Edition, 1818.

False Knowledge Is Worse Than Absolute Ignorance

"Charles M'Lean, MD, called in; and Examined:

- You have been in the practice of medicine for a good many years?

- Yes, 30 years. - Have you any knowledge of the Plague? - I have. In 1815, I employed myself in investigating that malady in the Greek Pest Hospital, near the Seven Towers at Constantinople. After administering remedies to the pestiferous patients of that hospital, and making observations on the disease for

17 days, I found it expedient, being myself, as I had expected, seized with the malady, and the system of the house being incompatible with personal safety, to discontinue my researches. Upon my recovery, I proposed to resume them upon a plan that should better combine personal safety with a prospect of successful investigation: but the Porte did not think fit to accede to my propositions.

The inferences supplied by my experiments were, however, sufficient to confirm, in respect to plague, those conclusions against the existence of contagion, which I had previously deduced, in respect to yellow fever, typhus and epidemic diseases generally... If it should be thought that this is but an inadequate experience, I would entreat of the Committee to recollect how little the value of experience may be commensurate with its duration; and that the result of experience in the application of false knowledge, is but dexterity in the practice of error; which is as much worse than mere inexperience, as False Knowledge Is Worse Than Absolute Ignorance.

Since the establishment of the Doctrine of Contagion, I am not aware that any other physician now living has been experimentally in such intimate collision as myself, with what is called "The Plague of the Levant"; and if the result of my researches should ultimately prove adequate to dispel, in respect to the cause of that malady, the darkness of centuries, they will not be denied to be of unprecedented efficiency. - You consider the plague as not contagious? - Yes. Do you use your words infectious and contagious synonymously? - In reference to what is known to be the general custom, I do so. - Have you ever seen an instance of a plague case imported into England, or heard of it? - Never; and after much inquiry I have reason to believe that it has never happened; as, if it had occurred, it would have been very likely to have been ostensibly recorded. - May not Epidemic Diseases, under-certain circumstances, become contagious? - Certainly not." - Dr Charles M'Lean, MD, in "On the Doctrine of Contagion in the Plague", Selection of reports and papers of the House of Commons, 29 April 1819.

Atmospheric Influence And The Crowded And Filthy State

"A Jew Physician at Smyrna, states, that, commonly, "the disease appears at the end of spring, and continues to the middle of summer, with this particularity, that, in cloudy weather, and during the Sirocco wind, the attacks are more frequent." Mr. Glasse, who served in Gibraltar for 10 years, and witnessed the fatal fever of 1804, as well as those of 1810, and 1813, thinks "the same atmospheric influence, which produced it in other parts of Spain, caused it at Gibraltar, and it was there most fatal from the crowded and filthy state of the garrison." Mr. Amiel, "labouring under our epidemical fever, on being removed to a pure and ventilated place, such as the neutral ground, or Europa point, did not communicate the disease to those in the closest contact with him; this observation has been confirmed in many instances, during the epidemie of last year, amongst the foreign recruits quartered at the brewery barracks."

"In the Leyden, lying in the bay of Carthagena, nearly 50 of the 67th regiment were attacked, and, except one, they all recovered on board: only such men, as, by going on shore, were exposed to the marsh air, were taken ill, and they did not communicate the disease to a single person on board." "With such powerful evidence of the non-contagious nature of this disease before me", says Dr. Burnet: "I cannot but conclude, that it is neither propagated by persons, or goods, but is the genuine product of miasma. It is useless for any one to say, in support of its contagious qualities, that whole families have been attacked; this only proves that whole families have been. exposed to the same remote cause. In Zealand, nearly whole regiments were taken ill with the fever, yet no one was hardy enough to assert that it was contagious." - in "Results of an Investigation, Respecting Epidemic and Pestilential Diseases: Including Researches in the Levant, Concerning the Plague", 1817.

A System of Sickness

"There is simply no other word for it.

We Practice a Medicine of Sickness which:

1. Is Concerned Only With Sickness, Not Health.
2. Recognizes only the existence of the body.
3. Treats only the symptoms, Not The Cause.
4. Keeps the Patient In The Dark, and dependent.
5. Encourages consumerism.

In 1994 a vast Vaccination Campaign against Hepatitis B was undertaken in Canada. It Is Both Useless, Dangerous and Costly.

And what for? Is there a hidden agenda? I note that the Province of Quebec is a particular target, over the course of 3 years.

1992 - Vaccination against Meningitis
1993 - Re-Vaccination against Meningitis
1994 - Vaccination against Hepatitis B.

I was there in 1993. it troubled me to see that it was aimed at a whole generation (1 to 20 years), in only one province. Since when do viruses respect borders, and specially provincial ones at that?

The facts are:

1. There was no epidemic, nor risk of one. Epidemiologists confirmed it.
2. Not one but three different vaccines were administered, each in a designated area.

3. Certain nurses were selected and trained to administer a special vaccine.
4. All children were entered into a computerized data bank.
5. The pressure to vaccinate the children was enormous. Schools were turned into clinics.
6. Those who did not want to be vaccinated were pointed out and treated as social outcasts.
7. Nurses chased down parents at home who did not want their pre-school children vaccinated.
8. The Vaccination cost $30 Million.

I had a direct account of one of these kids.

The mother Did Not Want her child Vaccinated.

The nurse who came to the house made her believe that it was "compulsory."

The mother gave in. The Child is Now Handicapped: Physically and Mentally (Paralyzed, Spastic).

Vaccine Obligation

1st Stage, Manipulation: Submission With Full Consent

Education

The authorities have instilled in us the belief that "Vaccinations are effective and harmless." Whoever questions this doctrine, be they a doctor or non-doctor, is a heretic. Yet we have come to learn that the reality is something else altogether. There is more. The authorities scrupulously uphold another myth. Namely, that vaccinations have wiped out the major epidemics. Yet these Epidemics had entirely Disappeared when the vaccines first came on the market." - Dr Ghislaine Saint-Pierre Lanctot, MD, in "The medical Mafia: How to get out of it alive and take back our health & wealth. Here's The Key", 1995.

The Medical Trade Using Powers Which Allow Them To Manipulate Life and Death and the Fate of Individuals

"Increasingly, they are achieving and using powers which allow them to manipulate life and death and the fate of individuals in a manner previously reserved to the Lord. Many medical practitioners who sincerely believe that, their "clinical judgement" is sacrosanct.

They seem unable to understand that decisions made in the light of their technical expertise often have implications and consequences of a kind which they don't have any special competence to evaluate, and that the "side effects" of medical intervention may be much more important to the individual or society than any immediate "clinical" result.

In 1967 the Physician Superintendent of Neasden Hospital in London, Dr William McMath, issued a memo detailing the categories of patients in his wards who were “Not To Be Resuscitated.”

The “Let Die” Directive

They included the very elderly (those over 65), and sufferers from cancer, chronic chest disease, or chronic kidney disease. A BBC team, got hold of a copy of the document and broadcast it to the nation. There was turmoil.

The Washington Post carried an article headed “Britain in Uproar” Over “Let Die” Directive.

Members of Parliament where assured by the Minister of Health that no such regulations existed in other National Health Service Hospitals and that an immediate inquiry had been ordered. The inquirers reported within a few days, stating that no patient had died at Neasden needlessly. McMath was only guilty of putting down on paper guidelines which half the hospitals in the land did then, and do now. Doctors decide when their fellow citizens, from the still unborn to the old, should die. They have no legal right to take such decisions.

The Medical Trade Desperately Pretend to Powers and Wisdoms They Do Not Possess

The message I have tried to convey is that good health springs from the good society, and that we are asking too much of the Medical Trade; desperately pretend to powers and wisdoms they do not possess.” - Dr Donald William Gould, MD, former deputy editor “Medical News”; editor “World Medicine”; medical correspondent “New Scientist”, in “The Medical Mafia: How Doctors Serve and Fail Their Customers”, 1987.

> ***“Doctors should not implant disease in the thoughts of their patients, as they so frequently do, by declaring disease to be a fixed fact, even before they go to work to eradicate the disease through the material faith which they inspire. Instead of furnishing thought with fear, they should try to correct this turbulent element of mortal mind by the influence of divine Love which casteth out fear. When man is governed by God, the ever-present Mind who understands all things, man knows that with God all things are possible. The only way to this living Truth, which heals the sick, is found in the Science of divine Mind as taught and demonstrated by Christ Jesus. To reduce inflammation, dissolve a tumor, or cure organic disease, I have found divine Truth more potent than all lower remedies. And why not, since Mind, God, is the source and condition of all existence?”*** *- Mary Baker Eddy, in “Science and Health with Key to the Scriptures”, 1875.*

New Healing Schools Needed

"In 1910, with the publication by Abraham Flexner, a non-physician, and a relatively unknown high school teacher, of his now famous Bulletin No. 4 of the Carnegie Foundation for the Advancement of Teaching, Medical Education in the United States and Canada ["Medical Education in the United States and Canada", A report to the Carnegie Foundation for the Advancement of Teaching, Bulletin No. 4, 1910], **events were set in motion that would revolutionize American medical education. Emphasis would now be focussed on medicine as a science, while the practice of the art would be relegated to a secondary role.**

So effective were Flexner's arguments and so cleverly and aggressively did he use the financial resources of the Rockefellers, and those he recruited from other philanthropists to manipulate university policy in support of his full-time plan, that most of the new schools of the 20th century, and many of the older schools selected to undergo reform were persuaded to commit themselves to his policy. Those who did protest, and there were a few powerful voices, were either squelched, suppressed, or ignored and bypassed in the stampede for philanthropic grants, scientific medicine, and Nobel prizes.

Dissatisfaction and complaint, at first rather subdued, soon reached crescendo proportions, expressing the unhappiness of many individuals with what they perceived to be undesirable trends in medical education and health care delivery, attributable in part to the full-time system.

Selected for special emphasis were **defects in the education and selection of medical students, the overemphasis of science to the neglect of the art of medicine,** the diminishing role of the practicing clinician in academic medicine, the **subservience of the care of the individual to excessive dependence on technology, machines and tests and, in general, the dehumanization and depersonalization of patient care.**

Blindness to these weaknesses on the part of Flexner and his disciples obstructed further reform and, in fact, served to polarize the medical profession into two armed camps, the "'full-timers" or academicians versus the "part-timers" or practitioners. **Fuel for the argument was provided by Flexner's intransigence, inflexibility, tactlessness and, on occasion, irrascibility.**

Osler Rebukes Flexner

I shall present overwhelming evidence that **Flexner's strict full-time concept for the clinical chairs was an unworkable; and contrived scheme dreamed up by a small band of basic scientists without clinical expertise and a coterie of laymen led by Flexner, having access to large foundation grants, who sought to revolutionize American medical education by manipulating university policy through gifts of substantial sums of money.**

Should the most important key clinical teachers in our medical schools be as Flexner envisaged, an elitist group eschewing personal service to patients, delegating patient care to subordinates, insulated against 24 hour demands for service, **isolated from contact with the community, and impervious to the requests of society for assistance in solving the problems of social reform so often associated with illness and disease?**

> *"Do you imagine for a moment that men whose interests are mainly in the research aspects of medicine, and who have no touch with the rank and file; the men behind the guns; do you suppose they would get into the arena and share the struggle of their brethren? A few with Welch's broad spirit would; a majority would live lives apart, with other thoughts and other ways. Those best fitted as teachers in the medical schools, the men with larger outlook, would soon kick over the traces and leave the positions to the quiet student-recluses, keen at research, but as little fitted to train medical students for the hurly-burly of life, as I would be to direct your laboratory. I cannot bear to think that any successor of mine should grow up deprived of those delightful associations which I enjoyed with the profession and the public. How barren would I feel my life without these memories!* ***And a great gap would be left in the education of a clinical teacher who had not known that inner life of the public which we meet in our ministry of health."*** *- Osler, in "The Story of John Hospkins", 1949,*

> ***"We are all for sale, dear Remsen (President of Johns Hopkins University). You and I have been in the market for years, and have loved to buy and sell our wares in brains and books; it has been our life. So with Institutions."*** *- Osler in "The Johns Hopkins Hospital", Vol. II, 1943.*

Would this not lead inevitably to the fulfilment of Sir William Osler's prophecy of 1911, in his famous letter to President Ira Remsen of Johns Hopkins University on full-time, in which he said:

> ***"The danger would be the evolution throughout the country of a set of clinical prigs the boundary of whose horizon would be the laboratory and whose only human interest was research, forgetful of the wider claims of a clinical professor as a trainer of-the young, a leader in the multiform activities of the profession, an interpreter of science to his generation, and a counsellor in public and in private of the people, in whose interests after all the school exists."*** *- in "The Johns Hopkins Hospital and University Medical School", Vol. III., 1963.*

This warning went unheeded and suppressed from view for 50 years. When the full-time system swept across the country, after World War II, many of Osler's predictions were fulfilled. **The System Had Taken Over Medical Education.**

> ***"When the problem is a failure of competence and morality, nothing will solve it but the work of an individual mind and conscience."*** *- Jacques Barzun, in "The professions under siege", Harper's, October 1978.*

Others have complained bitterly of the adverse effects of massive research expenditures on medicine in our leading Medical Schools. One of the most experienced and seasoned commentators was the Dean Wilburt C. Davison of Duke University in the essay, "Let's Give the Medical Schools Back to the Students." He criticized **the harmful results of excessive emphasis on research and the power falling into hands of those especially expert at grantsmanship.**

> ***"Until sound knowledge and the skill and desire to impart it are given the same prestige and dignity as that of publication, research will be rampant, and will remind some of us of the old gag at the Rockefeller Institute under Simon Flexner, namely, "A papera day keeps Simon away." In fact, the younger members of the faculty are so busy with this pressure of research in order to justify a renewal of their grants that they have no time or inclination to accept invitations to assist with the school's problems of teaching, administration, and student contacts. Many American medical schools, including Duke, are being converted into research institutes. Are crowding out the medical students from the teaching space in the laboratories and hospital wards, and creating in the students the image that research is superior to medical teaching and patient care. The curriculum has been so distorted that almost every student is compelled to engage in the research program."*** *- Dr W. C. Davison, MD, in "Let's give the medical schools back to the students", The Pharos, October 1963.*

Stevens described what happened in the medical schools in these terms:

> *"At the same time, the program of National Institute of Health (NIH) subsidies to universities for medical research transformed the research functions; and altered the balance of faculty interests; in the nominally independent medical schools.* ***By 1955, one-third (33%) of the income of medical schools was coming from outside research grants, chiefly from the federal government. Not only had the contributions by NIH become essential to the continued existence of the schools; the activities of the faculty had substantially changed. In 1949-1950 the average medical school had a full-time faculty of approximately 70, a substantial increase from 9 years earlier. In 1959-1960, the average full-time faculty was over 120 per school; of the total of 10,468 faculty thus represented, 1 in 7 received more than half of his Salary from Federal Sources, with Federal Money concentrated in the lower Academic Ranks. By 1968-69, the total number of fulltime faculty had reached 23,014, or over 250 per school.***

> *There was more than one full-time faculty member for every pair of medical students, but* ***many, if not most, of the faculty were not regularly involved in teaching medical students at all. The Medical Schools had de facto become extensively dependent on the Government through the back door of research subsidy."*** *- Stevens, in "American Medicine", 1971.*

Flexner's overemphasis on medicine as a science was unrealistic; **the practice of Medicine Is Not a Science But An Art,** and **physicians are not intended to be primarily scientists. The Art of Medicine soon declines if the physician or surgeon fails to practice it in daily personal contact with his patients.**

Surgical skills atrophy from disuse. Diagnostic and decision-making skills diminish when underutilized.

New Medical Schools Needed: Not the Post-Flexner Dinosaur Model!

We need more medical schools quite different from the existing ones. One of his serious mistakes was to underestimate the service function of the teaching hospital, in fact, Flexner repeatedly ignored service for science. Abraham Flexner and his dream that the university should dominate the medical school and its hospitals, his notions regarding financial rewards for clinicians versus academicians were unrealistic chiefly because he did not appreciate the importance of the service aspects of a doctor's existence. Perhaps what I have been trying to communicate to; and for our profession and those who seek admission to it was never so well said as in the beautiful timeless letter of Paul to the Corinthians speaking of spiritual gifts Chapter 12, Verses 4 to 11:

> *"Now there are diversities of gifts, but the same Spirit. And there are differences of administrations, but the same Lord. And there are diversities of operations, but it is the same God which worketh all in all. But the manifestation of the Spirit is given to every man to profit withal. For to one is given by the Spirit the word of wisdom; to another the word of knowledge by the same Spirit; To another faith by the same Spirit; to another the gifts of healing by the same Spirit; To another the working of miracles; to another prophecy; to another discerning of spirits; to another divers kinds of tongues; to another the interpretation of tongues; But all these worketh that one and the selfsame Spirit, dividing to every man severally as he will." - 1 Corinthians 12:4-11*

When the spiritual gifts of healing are bestowed and acquired by the physician, he is a man apart from his fellows, obligated to conduct his life in a manner beyond reproach, always remembering Paul admonition that over and beyond the spiritual gifts:

> ***"And now abideth faith, hope, charity, these three; but the greatest of these is charity."***
> *- 1 Corinthians 13:13*

My word to those of our profession and those preparing to enter into it is to cherish and guard the God-given gift of healing and constantly seek to live by the rules of Christ." - Dr Michael J. Lepore, MD, Professor of Clinical Medicine, New York University School of Medicine, in "Death of the Clinician; Requiem or Reveille?", 1982.

"With these remarks I close this branch of our subject. If I have spoken freely, it has been as a friend. I have not written from the recesses of the cloister, but in the midst of society. Observation and personal experience have dictated every sentence, and have afforded me satisfactory evidence of its truth. For this, moreover, I might appeal to all my enlightened brethren.
Not one of them could venture to gainsay , what has been asserted, nor commend the apathy which connives at the errors and abuses, which have been exposed. Let them begin the good work of reformation, and society will come quickly to their aid." *- Daniel Drake, in "Practical Essays on Medical Education, and the Medical Profession in the United States", 1832.*

How Do We Break Out of This Thucydidean Trap

"And more than Two Millennia later; We Seem Still Trapped in Thucydides World. None of the ways in which those quarrelsome Greeks behaved is suited to these Dread Times of" This Medical Trade "Menace. Yet We Still Behave in Those Ways; And Can Find No Other. How Do We Break Out of This Thucydidean Trap; Which Now Threatens To Strangle; If Not To Destroy, Our World?" *- in "Sadness and Hope", Naval War College Review, October 1980.*

Medical Affairs Is The Root Cause of the Greatest Threat to Man

MonoMedicine Medical and Psychiatric Control Is A Dangerous, Coercive Force

"Medical affairs is the root cause of the greatest threat to man: members of his own species, bent on ensuring his salvation, security, and sanity." *- Dr Thomas S. Szasz, MD, Professor of Psychiatry Emeritus, in "The Untamed Tongue: A Dissenting Dictionary", 1990.*

The Major Threat To Health In The World Is Modern Medicine

> ***"The Medical Establishment has become a Major Threat to Health. Social Iatrogenesis is at work when health care is turned into a standardized item, a staple; when all suffering is "hospitalized and homes become inhospitable to birth, sickness, and death; when the language in which people could experience their bodies is turned into bureaucratic gobbledegook; or when suffering, mourning and healing outside the patient role are labelled a form of deviance."*** *- Ivan Illich, in "Medical Nemesis", 1975.*

"The closest I ever came to a religious experience was listening to Ivan Illich.

A charismatic and passionate man surrounded by the fossils of the academic hierarchy in Edinburgh, he argued that "The Major Threat To Health in the World is Modern Medicine." This was 1974.

He convinced me, not least because I felt that what I saw on the wards of the Royal Infirmary of Edinburgh was more for the benefit of doctors than patients.

I Dropped Out of Medical School That Day.

Now I'm the Editor of the British Medical Journal, which is ironic.

Having Deserted Medicine, I've become a pillar of the British medical establishment.

I devoured both Medical Nemesis and Limits to Medicine, and now I've reread the latter; for the first time in 25 years.

The power of the book is undiminished, and its prescience seems remarkable." - Richard Smith, in "Limits to medicine. Medical nemesis: the expropriation of health", Journal of Epidemiology Community Health, December 2003.

Medical Iatrogenesis:
The Medicalization of Society

> ***"Illich describes this expropriation of health as Iatrogenesis, an old medical term for harms or conditions originating with the doctor. The word is commonly used today to refer to such, by now well-publicized, medical snafus as getting the wrong drug or the wrong operation, but Illich gives it a much wider reference. He speaks first of clinical iatrogenesis, in which he groups the harms directly due to medical treatment: people made sick by their medicine, their therapy, or their diagnosis; and people made dependent by illusions about the doctor's effectiveness."*** *- in "The Rivers North of the Future; The testament of Ivan Illich", 2005.*

"When I wrote Medical Nemesis, I was not aware of how far the Iatrogenic power of medicine actually extends.

When I spoke of Iatrogenesis in that book, I used the term in the way in which everybody in medicine ordinarily uses it; to refer to Doctor-Generated Harms, or The Production of Disease through too much medicine, the Wrong Medicine, the Wrong Combination of Medicines, the Irresponsibility of the Doctor, Experimentation by the Doctor, mistaken identity in which the wrong persons foot is cut off because he has been assigned the wrong number, and so on; all those horrors which were news then and by now are taken totally for granted. What I had not realized, I said in that article, was the degree to which the very experience of living is changed through modern medicine." - Ivan Illich, in "The Rivers North of the Future; The testament of Ivan Illich", 2005.

Don't Trust The Medical Trade

The Medical Trade is going to be fuming, it will strike back. The Medical Trade suffers from Compulsive Lying Disorder, it will rebuke, and write low quality books, with much "Mumbo Jumbo" to Convincing the Uneducated, the Naïve, those that are Unaware, of the direct opposite to that which this Book States and reveals in minute detail. When this attacks come, for they will come, Beware Don't Believe a Word They Say and Write. Beware of The False Narratives, Proposed by the Medical Trade, which in turn they are Freely Entertained by Politicians. If this Medical Trade Nonsense is allowed to continue, it can only lead this present Civilization into a path of Total Disease, Medical Trade Coercion, and Fear, Forced Medication and Vaccination, Chaos and Medical Trade Imprisonment Lockdowns, where Lives and Businesses are Destroyed.

Beware of The Medical Trade

> ***"Beware of false prophets, which come to you in sheep's clothing, but inwardly they are ravening wolves. Ye shall know them by their fruits. Do men gather grapes of thorns, or figs of thistles? Even so every good tree bringeth forth good fruit; but a corrupt tree bringeth forth evil fruit. A good tree cannot bring forth evil fruit, neither can a corrupt tree bring forth good fruit. Every tree that bringeth not forth good fruit is hewn down, and cast into the fire. Wherefore by their fruits ye shall know them."*** *- Matthew 7:15-20*

In Front of You There Is Good and Evil Choose Thou

> ***"I have set before thee this day life and good, and death and evil."*** *- Deuteronomy 30:15*

When You Make It Difficult For People In Their Lives,They Lose Their Ideological Bullshit And They Get Vaccinated

"I have to say that I don't see a big solution, other than some sort of Mandatory Vaccination. I know Federal Officials don't like to use that term. Once people feel empowered and protected legally, you're going to have Schools, Universities and Colleges are going to say: "You want to come to this college buddy, you're going to get Vaccinated. Lady, you're going to Get Vaccinated." Big Corporations, like Amazon and Facebook and all of those others, are going to say: "You want to work for us, You Get Vaccinated." And it's been proven that When You Make It Difficult For People In Their Lives, They Lose Their Ideological Bullshit And They Get Vaccinated." - Dr Anthony Fauci, MD, e Director of the National Institute of Allergy and Infectious Diseases, in interview by Michael Specter, "Fauci", 5 October 2020.

There Is Something Stronger Than An Army And That Is An Idea Whose Time has Come

"The star possesses no anger; the dawn bears no malice. Light is satisfied in being Light. Light is everything; the human race has no other love. France knows herself beloved because she is good and the greatest of all powers is to be loved. The French revolution is for all the world. It is a battle perpetually waged for Right, and perpetually gained for Truth. Right is the innermost part of man; Truth is the innermost part of God. What can be done against a revolution which has so much right on its side? Nothing. To love it. That is what the nations do. France offers herself, the world accepts her. The whole phenomenon lies in these few words. An invasion of armies can be resisted; an invasion of ideas cannot be resisted. The glory of barbarians is to be conquered by humanity; the glory of savages is to be conquered by Civilization; the glory of darkness is to be conquered by the torch." - Victor Hugo, in "The History of a Crime", 1877.

Moving Forward

Don Miguel de Cervantes Saaverdra, wrote a book called:

"The Ingenious Gentleman Don Quixote of La Mancha", 1605 A.D.

Don makes it his mission to revive Chivalry, along with his squire Sancho Panza, whom is known for his many "sanchismos", quotes that use wit and humour, and ironic proverbs. While there are many quotes to chose from; we dedicate this quote to the Medical Trade Future Attacks to Emunctology.

"Let The Dogs Bark Sancho, It Is A Sign That We're Moving Forward!"

Chapter 44

The Paradigm Of The Queen Bee

Why Queen Bees Live Longer

Worker Bees live between 4 weeks to 6 months.

The lifespan of a Worker Bee varies dramatically depending on the time of year and their workload, ranging from a quick 4 to 6 weeks in the summer to 4 to 6 months over the winter.

Queen Bees Live Significantly Longer than Worker Bees: 2 to 5 Years.

Because of:

1. Specialised Diet.
2. Unique Gut Microbiome.
3. Social Community Environment. The Protective, Pampering Care of their Colony.

Queen Bee Lives 20 Times Longer

"Queen Bees eat royal jelly, which has Antioxidants, and Less Sugar than the honey that Worker Bees eat. This is thought to be Part of the Reasons Queens outlive Worker Bees. The Gut Bacteria of Queen bees are thought to be connected to their much Longer Lifespans as well.

Worker Bees consume high levels of Sugar because of all the honey they eat, and the pancreas releases insulin to help with the uptake of glucose from the bloodstream.

Since Queens survive on royal jelly, they are Not Eating nearly as much Sugar. Researchers found was that Transplanting Gut Microbes from a queen into workers without Gut Microbes extended workers lives, most likely because the Queen Bees Gut Bacteria Regulates Food Intake.

Insulin signaling and antioxidant pathways were also found to be related.

Royal jelly contains Antioxidants, which reduce oxidative stress, or cell damage from free radicals, highly unstable and reactive oxygen molecules.

> ***"Our findings highlight the intricate interplay between pathogens, metabolic state, and immune response in Honey Bee Queens."*** *- "A longitudinal study of Queen health in honey Bees reveals tissue specific response to seasonal changes and pathogen pressure", Scientific Reports, 18 April 2024.*

Researchers observed honeybee queens and saw that older queens had larger gut microbes, which suggested that there was a relationship between their gut microbiome and immune health." - in "A Queen Bee Lives 20 Times Longer Than Her Workers. Scientists Want to Steal Her Secrets For Humanity", Popular Mechanics, 9 April 2025.

I

The Diet Factor

While both Bees hatch from identical female eggs, the Queen Bee is exclusively fed a nutrient-rich superfood called royal jelly, triggering entirely different biological development.

The Royal Diet

Queens exclusively eat royal jelly, a nutrient-dense secretion rich in vitamins and proteins. This diet allows the Queen Bee to fully develop a reproductive system, and Boosting her Overall Physical Longevity.

Gut Bacteria

Queen Bees have a specialised, Gut Microbiome that Worker Bees lack. These symbiotic gut bacteria increase her antioxidant capacity and reduce oxidative damage to her cells.

II

Relationship Between Gut Microbiota and Bee Lifespan

> ***"Investigating the reasons why queens live longer than workers is of great significance for research on the universal processes of aging in animals. The Gut Microbiome has received attention as A Vital Regulator of Host Health. The effects and Mechanisms Behind the Relationship Between Gut Microbiota and worker Lifespan were measured by transplanting Queen Bee Gut Bacteria and Worker Bee Gut Bacteria into Microbiota-Free workers. The transplantation of Queen Bee Gut Bacteria to Microbiota-Free Bees Significantly Extended the Worker Bees Lifespans compared with Microbiota-Free and Worker Bee Gut Bacteria Bees. The results of the present study demonstrated that Queen Bee Gut Bacteria Prolonged the Lifespan of Microbiota-Free Bees."*** *- in "Queen bee gut microbiota extends honeybee lifespan by inhibiting insulin signaling", Applied and Environmental Microbiololgy, 17 April 2024.*

III

The Social Community Environment

> *"Social relationships, or the relative lack thereof, constitute a major risk factor for health; rivalling the effect of well established health risk factors such as cigarette smoking, blood pressure, blood lipids, obesity and physical activity."* - *"Social relationships and health", Science 1988.*

Comprising Social Cohesion, Integration, and everyday interaction:

Is a Primary Factor of Longevity. Research finding that Isolation Increases Mortality Risk by at least 50%.

> ***"Individuals with adequate social relationships have a 50% greater likelihood of survival compared to those with poor or insufficient social relationships. The magnitude of this effect is comparable with quitting smoking and it exceeds many well-known risk factors for mortality (e.g., obesity, physical inactivity). These findings also reveal significant variability in the predictive utility of social relationship variables, with multidimensional assessments of social integration being optimal when assessing an individual's risk for mortality and evidence that social isolation has a similar influence on mortality to other measures of social relationships. The overall effect remained consistent across a number of factors, including age, sex, initial health status, follow-up period, and cause of death, suggesting that the association between social relationships and mortality may be general. Individuals do not exist in isolation; social factors influence individuals' health though cognitive, affective, and behavioral pathways."*** *- in "PLoS Med", 27 July 2010.*

"The least powerful predictor to the strongest, getting towards the top predictors are 2 features of your social life:

Close Relationships

First, your close relationships; who will sit with you, if you're having an existential crisis, if you are in despair. Those people, that little clutch of people are a strong predictor of how long you'll live.

Social Integration

And then something that surprised me, that is called Social Integration. This means how much you interact with people as you move through your day.

How many people do you talk to?

And these mean both your weak and your strong bonds, not just the people you are really close to, who mean a lot to you, but, like, do you talk to the person who every day makes you your coffee?

Do you talk to the postman?

Do you talk to the woman who walks by your house every day with her dog?

Do you play games, do you belong to a club?

Those interactions are one of the strongest predictors of how long you'll live.

Face-to-face contact releases a whole cascade of Neurotransmitters, they protect you. Simply making eye contact with somebody, shaking hands, is enough to release Oxytocin, which increases your level of trust, it lowers your stress. And Dopamine is generated, which gives us a little high and it kills pain like a naturally produced morphine." - Susan Pinker, in "The secret to living longer may be your social life", TED Talks, 4 September 2017.

Hive Pampering

The Worker Bees:

1. **Feed her (Diet).**
2. **Clean her (Hygiene).**
3. **Regulate her Temperature (Homeostasis).**
4. **Protect her (Social Community Support).**

Cleanliness Is Indeed Next To Godliness

The Lack of Cleanliness Brings Disease, and Discouraging Forces.

"Heal The Sick, Cleanse The Lepers." - *Matthew 10:8*

"Eyes have they, but they see not. They have ears, but they hear not." - Psalm 115:5-6

"Having eyes, see ye not? and having ears, hear ye not? and do ye not remember?" *- Mark 8:18*

Having eyes they see, and yet do not perceive; having ears they hear, yet do not understand.

"And he said unto them, How is it that ye do not understand?" *- Mark 8:21*

"LORD, open the eyes of these men, that they may see. And the LORD opened their eyes, and they saw." *- 2 Kings 6:20*

The Medical Trade: Giving Erroneous and Dangerous Advise

> *"Let them alone: they be blind leaders of the blind. And if the blind lead the blind, both shall fall into the ditch."* - *Matthew 15:14*

Claim That Cancer Is Due To: Improper Diet, Thinking, Lifestyle; Is Without Foundation

> ***"Claim that Cancer Is Largely Due To: Improper Diet, Thinking, and Lifestyle is Entirely Without Foundation."*** *- Dr Fredrick J. Stare, MD and Dr Elizabeth M. Whelan, Sc.D., MPH, in "Fad-Free Nutrition", 1998.*

Dr Fredrick J. Stare, MD

Dr Fredrick J. Stare, MD, American Nutritionist regarded as one of the country's most influential teachers of nutrition.

> *"Dr Fredrick J. Stare, a co-founder of the American Council on Science and Health, was one of the nation's foremost nutritionists. For many years chairing, the Department of Nutrition at the Harvard School of Public Health, Dr Stare was extremely active in providing sound, scientifically-based nutrition information to the public." - in "The American Council on Science and Health", 2026.*

"Dr Stare America's Top Nutritionist, founded the Department of Nutrition, Harvard's School of Public Health, 1942, when the science was young, and ran it for 34 years. Wrote 18 Books, 400 Articles on How Americans Should Eat, and Advised the Government. **What Americans Ate He Believed Could Not Possibly Harm their Health.** **Vitamin Supplements Were Unnecessary** for any normal healthy person. There was no virtue in trying to sustain life on 3 slices of apple and a lettuce leaf. Nor should any part of American Diet be demonised. **Dr Stare leapt to the defence of Sugar** ("a quick energy food... put a teaspoon in your coffee or tea 3 or 4 times a day"); **Coca-Cola ("a healthy between-meals snack"), and all those nasty Es ("Eat your additives. They are good for you").** The American Food Industry thought it had a friend in Dr Stare. Any recommendation he made was bound to please some Lobby or other. **Manufacturers of Corn Oil and Margarine much appreciated his intervention in the Great Lipids Controversy of the early 1960s, Dr Stare decided, untypically, to demonise Butter, and recommended that all Americans should drink a cup of Corn Oil a Day. In the late 1950s Dr Stare became a leading campaigner for the Fluoridation of public drinking water."** - in "The Economist", 18 April 2002.

Dr Frederick J. Stare, MD
"Nutrition Expert" Dies From Cancer And Cardiovascular Disease

> ***"Frederick J. Stare America's Leading Nutritionist and a resolute defender of the American Diet.*** *In 1942 he was asked to establish the Department of Nutrition at Harvard University. Started off Studying the Link Between Diet and Cardiovascular Disease." - in "Frederick Stare", The Telegraph, 26 April 2002.*

"Frederick J. Stare, a crusading Nutritionist who founded Harvard Department of Nutrition, died last Thursday at his home in Wellesley, Mass. He was 91. **The cause of death was complications from the treatment of prostate Cancer and Cardiovascular Disease.** Stare built his career attacking quack diets and health food advocates on television and radio and in his nationally syndicated newspaper column: "Food and Your Health." He argued that **potentially harmful foods, could be beneficial when consumed in moderation. Supported the process of Fluoridating public drinking water** to prevent tooth decay. He defended food preservatives and chemical additives as beneficial and necessary." - in "Nutrition Department Crusader Dead at 91", The Harvard Crimson, 9 April 2002.

Dr Elizabeth M. Whelan, Sc.D., MPH

> *Elizabeth M. Whelan, and Fredrick J. Stare, were highly influential "Public Health Experts" who collaborated to found the "American Council on Science and Health" in 1978.*

"There Is A Substantial and Compelling Medical Literature Documenting Cancer-Preventing Effects of Vioxx, Celebrex, Evista, and Aspirin and other Over The Counter Non-Steroidal Anti-Inflammatory Drugs (NSAIDs).

Consumers have a right to know about it.

The PubMed search engine finds some 260 articles about NSAIDs and cancer, many documenting the relationship between the use of this type of drug and reductions in occurrence of polyps and colorectal cancer.

Indeed, in December 1999 the FDA approved Celebrex for patients with a significant family history of colon cancer, and recent data suggest Vioxx may soon be approved for this purpose as well.

The manufacturers of Celebrex, Vioxx, and Evista (Pharmacia, Merck, and Lilly) should be permitted to release their exciting, potentially life-saving information." - Dr Elizabeth M. Whelan, president of the American Council on Science and Health, in "Hazardous to Your Health", National Review, 21 August 2003.

Vioxx Scandal - Manufactured by Merck

> *"**Multinational Drug Company Merck, knew 4 years ago that its blockbuster Painkiller Vioxx Was Causing Thousands of Heart Attacks and Deaths,** but kept it on the market until 5 weeks ago, scientists said last night. **Evidence that the scientific data clearly showed up the dangers of the drug as early as 2000.** " - in **"Drug Giant Ignored Vioxx Heart Risk"**, The Guardian, 5 November 2004.*

> *"The Nonsteroidal Anti-Inflammatory Drug (NSAID) Vioxx and you are sure to elicit an emotional response from most scientists, clinicians, regulators, and patients. Some consider the voluntary removal of **Vioxx** from the market in September 2004 by its Manufacturer, Merck, after **studies revealed that it was linked to an Increase in Dangerous Cardiovascular Events such as Strokes and Heart Attack." - in "Poison Pills: The untold story of the Vioxx Drug Scandal"**, The Journal of Clinical Investigation, 2 March 2009.*

On 11 March 2009, Scott S. Reuben, former chief of acute pain at Baystate Medical Center, Springfield, Mass., revealed that **Data for 21 Studies he had authored for the efficacy of the Drug (along with others such as Celecoxib) Had Been Fabricated.**

Withdrawal of the Drug from the market worldwide on 30 September 2004.

Vioxx is also known as Ceoxx, Ceeoxx, Rofecoxib.

Celebrex Scandal - Manufactured by Pfizer

On 20 April 1999, The Wall Street Journal reported that **Celecoxib (Celebrex) has been linked to 10 Deaths, and 11 cases of Gastrointestinal Hemorrhages.**

The Celebrex Scandal centers on **hidden Cardiovascular Risks Associated with the COX-2 Inhibitor Painkiller, as well as deceptive marketing practices by Manufacturer Pfizer.**

The Drug was linked to an increased Risk of Heart Attacks and Strokes, leading to government investigations, black box warnings, and massive financial settlements.

Evista Scandal – Manufactured by Eli Lilly

“American Pharmaceutical Manufacturer Eli Lilly and Company agreed to plead guilty and to pay $36 Million in connection with its illegal promotion of its Pharmaceutical Drug Evista, the Justice Department announced today.

In pleading guilty to a criminal count of violating the Food, Drug, and Cosmetic Act by misbranding its Drug Evista, the Indianapolis-based company agreed to pay a $6 Million criminal fine and forfeit to the United States an additional sum of $6 Million.

In addition to the criminal plea, Lilly has agreed to settle civil Food, Drug, and Cosmetic Act liabilities by entering into a consent decree of permanent injunction and paying the United States $24 Million in equitable disgorgement.

Lilly was charged in a criminal information filed today with violation of the Food, Drug, and Cosmetic Act, following an investigation by the Food and Drug Administration’s (FDA) Office of Criminal Investigations.

A plea agreement signed by Lilly and the United States, a complaint for permanent injunction, and a consent decree of permanent injunction signed by the pharmaceutical company and the United States were also filed with the U.S. District Court for the Southern District of Indiana in Indianapolis.” - in “Eli Lilly and Company to Pay U.S. $36 Million Relating to Off-Label Promotion”, Department of Justice, 1 December 2005.

Evista is also known as Raloxifene.

Black Box Warnings were added to the label of Raloxifene in 2007. **Warning of Increased Risk of Death due to Stroke** for postmenopausal women with documented coronary heart disease or at increased risk for major coronary events, as well as increased risk for deep vein thrombosis and pulmonary embolism.

DDT Has Saved More Lives Than Any Other Chemical

“Rachel Carson’s lyrical but **scientifically flawed book, “Silent Spring”, 1962, argued erroneously, that Pesticides, especially DDT, were poisoning both wildlife and the environment – and also endangering human health.**

The National Academy of Sciences, the American Medical Association, and the U.S. Surgeon General were among those who dismissed these charges and came out in support of continuing to use DDT to fight disease and protect crops.

While any man-on-the-street interview will yield an overwhelming majority of negative comments about DDT — a **“highly toxic, killer chemical”** – the reality is that DDT has saved more lives than any other man-made chemical.” - **Dr Elizabeth M. Whelan, president of the American Council on Science and Health**, in “The Deadly War against DDT”, National Review, 15 September 2010.

DDT Mounting Scientific Evidence of Its Toxicity

Scientific evidence for Toxicity of DDT (dichlorodiphenyltrichloroethane) and its metabolites (like DDE and DDD) has mounted steadily, establishing it as a Highly Persistent and Bioaccumulative Toxin.

Decades of Research Have Linked it to a broad range of Neurotoxic, Carcinogenic, and Endocrine-Disrupting Effects, revealing that its Health Impacts can even Span Multiple Generations.

Neurological Risks: DDT primarily attacks the nervous system by causing nerve cells to fire uncontrollably, resulting in severe tremors and convulsions in exposed wildlife and lab animals.

Carcinogenicity: “Some animals exposed to DDT in studies developed liver tumors. As a result, today, DDT is classified as a probable human carcinogen by U.S. Authorities.” - in “DDT - A Brief History and Status”, U. S. Environmental Protection Agency, 11 September 2025.

Smoking and Sunlight Cause Cancer Not Chemicals in Air, Water and Food

“The panel’s 200-plus-page report is a scientific travesty that claims Environmental Chemicals have been routinely understated as a Cause of Cancer. Made up of just 2 members — Dr LaSalle Leffall of Howard University and Dr Margaret Kripke, professor emeritus at the M. D. Anderson Cancer Center in Houston — the panel concluded that there is “grievous harm” being done by chemicals and there is “a growing body of evidence linking environmental exposures [to chemicals] to cancer.” **If Dr Leffall and Dr Kripke had simply consulted a standard textbook on cancer epidemiology, they would have learned that lifestyle factors such as smoking, obesity, excessive alcohol consumption, and overexposure to Sunlight are the underlying preventable causes of human cancer — Not “Chemicals” in Air, Water, and Food.**

The panel’s report, which was roundly criticized by the American Cancer Society, and other Experts on Cancer causation, was constructed on a number of false premises:

1. It assumed that “chemicals” are dangerous by definition and our exposure to them should be limited.

2. It assumes that our goal in cancer prevention should be to eliminate all exposure to “toxic” and “carcinogenic” agents.

3. The panel relies upon and endorses the so-called “precautionary principle,” which demands that every chemical be proven safe before it is used.

For example, the panel's report repeatedly targets the Chemical BPA as posing numerous health risks, including cancer." - Dr Elizabeth M. Whelan, president of the American Council on Science and Health, in "Crying Wolf about 'Chemicals' and Cancer", National Review, 14 May 2010.

Z-Trim - Cannot be Digested by the Human Body

"Creative chefs could be encouraged to experiment with Z-Trim or Simplesse, which are currently available fat substitutes that can be used to create such items as reduced-calorie butter, mayonnaise, cream cheese, and mashed potatoes, all nearly indistinguishable from their full-fat counterparts. **If the unfairly maligned fat-substitute Olestra** is ever welcomed back from exile, the options for creating tasty, low-fat foods — including, for instance, French fries — will increase even more dramatically. Restaurants, like any business, operate on the principle **"give the customers what they want."**

Restaurants cannot coerce patrons to choose salads over burgers and fries, and it is hopeless to ask them to do so. It is the customer who calls the shots." - **Dr Elizabeth M. Whelan, president of the American Council on Science and Health**, in "It s the Food, Stupid", National Review, 31 May 2006.

Z-Trim; Cannot be Digested by the Human Body.

Olestra - Sugar and Vegetable Oil

Olestra (Olean) is a zero-calorie, Indigestible Fat substitute, Made from Sugar and Vegetable Oil.

"When it comes to nutrition, what better equation could there be than zero calories, zero grams of cholesterol and zero grams of fat?

In January 1996, the FDA approved Olestra as a food additive.

Cut out the unhealthy cooking oil.

Shred the package of shortening. **Bury the stick of butter.**

Frito-Lay was among the first companies to jump on board, introducing its WOW! division of potato chips in 1998 to claim fat-free stomach satisfaction.

But Olestra proved to be a greedy chemical.

It not only removed unwanted fat from foods but also negated the body's ability to absorb essential vitamins.

Side effects included cramps, gas and loose bowels, turning fat-free French fries into a foiled business fad.

The FDA has kept Olestra as a legal food additive to this day, though**, leaving its health implications in the hands of individual consumers."** - in **"The 50 Worst Inventions",** Time, 27 May 2010.

Medicine Is Where: “Stupid Ideas Become Comfortable Echo Chambers”

“In the World of Medicine: There is Always Critical Shortage of Effectiveness in Treatments, but there is no lack of stupidity. More ironic is that; **A stupid idea could soon become a comfortable echo chamber, which in turn “Protects” the Blind Believers from the “Risky” Real World; thus the desired constant advance of Medical Science & Technology has been rendered impossible.**

With Buckets Full of Holes: Nothing Will Ever Be Settled

“The history of practical medicine had been like: The Story of the Danaides.

> ***“The Danaïdes were the 50 daughters of Danaus, who fled to Argos to avoid forced marriages to their cousins, the sons of Aegyptus. Compelled by their father to murder their new husbands on their wedding night, all but one complied. Consequently, they were condemned in the afterlife to eternally carry water in leaky jars.”***

> ***“Experience had been, from time immemorial, pouring its flowing treasures into buckets full of holes. At the existing rate of supply and leakage they would never be filled; nothing would ever be settled in medicine.”*** *- Dr Oliver W. Holmes, MD, in “Medical Essays”, 1883.*

Dr Oliver W. Holmes, MD, Professor at Harvard University; laments that the history of practical medicine resembles an endless task of filling with water a bucket full of holes.” - Brook C., in “The No. 1 Stupidity in Medicine: Buckets Full of Holes”, LinkedIn, 12 January 2025.

Dr Elizabeth M. Whelan, Sc.D. “Nutrition Expert” Dies From Sepsis

“The cause was Complications of Sepsis, her husband, Stephen T. Whelan, said. Dr Whelan collaborated with Dr Fredrick J. Stare, who Founded the Nutrition Department at the Harvard School of Public Health.” - in “Elizabeth Whelan”, The New York Times, 17 September 2014.

Relevance of Nutrition to Sepsis

Vitamin Requirements of Seriously Injured Patients With and Without Sepsis

“What is appropriate (ideally, the optimal) Vitamin Therapy for patients with serious injury or illness, especially when complicated by Sepsis?

The evidence regarding Vitamins A, C, and vitamin B1 (Thiamine) is sufficient to confirm predictable synergy of a deficiency of each of these vitamins with bacterial challenge; that is, host defense (local and/or systemic) is depressed sufficiently in each of **these Vitamin deficiencies so that the incidence and severity of bacterial infections are enhanced.**

Vitamin A

The salutary effects of Supplemental Vitamin A on Wound Healing.

We believe that the immunostimulatory activity of dietary vitamin A is due in large part to its effect on the Thymus and some other Lymphocytes as well as Monocytes. When given via the gastrointestinal tract, dietary Vitamin A is absorbed by small bowel mucosae and transported in the Lymph Draining these Segments of the Gut.

In addition to generating lymph high in Vitamin A, the lamina propria and Peyer’s Patches provide the lymph with high concentrations of B lymphocytes and monocytes.

We believe that the interactions between Vitamin A and these White Blood cells in the Lymph lead to activation of these 2 cell types.

The activated cells and Vitamin A enter the blood circulation via the subclavian vein and are distributed. Others have reported that **Supplemental Vitamin A Increases Resistance to Bacterial Infections.**

Vitamin C

Possible changes in the metabolism of and requirements for ascorbic acid after injury and sepsis have interested investigators for many years **because of the profound adverse effect of Vitamin C (Ascorbic Acid) Deficiency on Wound Healing and Infection.**

When extra Vitamin C was given, the impaired healing was prevented.

Thiamine, Riboflavin, Niacin, and Pyridoxine

In their studies of ascorbic acid in seriously injured patients, Levenson also found abrupt drops in plasma concentrations and urinary excretions of thiamine, riboflavin, nicotinamide, and pyridoxine. The changes in plasma levels could be largely prevented by supplements of these Vitamins.

Vitamin E

Data show that supplemental vitamin E will:

1. Lessen significantly the pulmonary toxicity of inspired high oxygen (ozone) concentrations
2. May ameliorate the retrolental fibroplasia of infants exposed to high environmental oxygen concentrations.

The requirements for most Vitamins, are increased substantially over normal after severe injury and that complicating sepsis is likely to increase the requirements even further. The aim should be to prevent or correct metabolically and physiologically significant vitamin deficiency, and to supply amounts of vitamins that will permit optimal host responses, wound healing, and resistance to infection. The amounts of certain vitamins needed are increased in patients with specific pre-existing illnesses; eg, thiamine requirement is increased in alcoholics. Also, **some patients may have varying degrees of malnutrition, including Vitamin deficiencies, and one should attempt to correct these.** A number of Vitamin Deficiencies (occasionally Vitamins A and B12 "luxus vitamins" are stored in the liver in large amounts, the body uses when needed) influence various specific and nonspecific immunologic and neutrophil responses.

Predisposing Factors in Sepsis

Nutritional indices such as albumin, ceruloplasmin, prealbumin, and transferrin are important?

Reaction to Sepsis

Just as every organ may suffer from the effects of overwhelming infection, so every organ and organ system is marshaled for the defense of the whole.

Maintenance of sufficient cardiac output to attain adequate nutrient perfusion of tissues, perhaps in the face of significant arteriovenous shunting, is a key to survival when large cardiac outputs are required. **Adequate Oxygenation of Blood by the lung is an important limiting factor. The general response to infection includes alteration of the sensorium, hyperventilation, fever (usually), leukocytosis (usually), and often Bacteremia.**

Bacteremia

It has been found that the number of organisms per millilitre of blood correlates with mortality. It was shown that a blood bacterial count of more than 1,000 organisms per millilitre was associated with a 70% mortality.

Metabolic Factors

Of the metabolic factors, it has been shown by Freund, that Plasma Amino Acids can predict mortality. The most useful Amino Acids for this prediction are arginine, cysteine, methionine, isoleucine, tyro-sine, phenylalanine, and alanine.

Lethal Factors in Sepsis

Association of factors in lethal combination is well known. Some of these factors aggravate the morbidity and mortality in sepsis. Interrelationships of these factors with infection are portrayed in the Figure. The ability to drain a localized abscess adequately or to irrigate infected cavities may be life-saving. **Correction of Nutritional Depletion will usually restore immunocompetence and enhance survival.** We covered a tremendous amount of ground at this Third Ross Conference on Medical Research: "Relevance of Nutrition to Sepsis." (This landmark conference **highlighted that Septic Patients enter a highly catabolic [muscle-wasting] state, where Nutritional Support Is Vital to Preserve Survival).**

The highlight of this meeting to me; was my awareness that certain things are going on in areas that I am not normally familiar with that may be of value to me in the future. One other aspect that has emerged is that **the changes in Peripheral Metabolism, particularly the changes in some Amino Acids, likely Affect the Central Nervous System. The central mediating factors will become an important part of the Whole Picture.**

Caloric Stores, Amino Acid stores

Caloric Stores, Amino Acid Stores, or the nature of what is being supplied will be very important, both on a whole-organ basis, and perhaps even at a micronutrient level. In sepsis is a mitochondrial or intracellular problem and transfers between different organelles are important, then the nutrients normally present in small quantities will become increasingly important in the scheme. The administration of any nutrient group is not an unmixed blessing; there are certain fairly narrow, normal ranges in which optimal function occurs, and it is likely that both excesses and deficiencies are injurious.

The Gut Is The Prominent Endocrine Organ

The Gut is the body's largest endocrine organ. Scattered throughout the intestinal lining are specialized enteroendocrine cells that act as sensory chemical factories. It is not clear from the state of the art with respect to nutrition or to a number of other things whether or not enteral or parenteral administration is more important, but several tantalizing experiments suggest that the gut, as a prominent endocrine organ and probably as a prominent immunologic organ, may be extremely important with respect to route.

Nutrients can function to interact with some other effects, namely host resistance and some of the other components of human or animal defenses against infection." - in "Relevance of Nutrition to Sepsis", 1982.

Amino Acids

Amino Acids are the building blocks of protein, and you must get essential ones directly from your diet since your body cannot make them.

The 20 amino acids required by the human body are categorized into 3 groups:

9 Essential Amino Acids: Cannot be synthesized by your body and must be acquired from the foods you eat.

11 Non-Essential Amino Acids: Can be synthesized directly by your body.

Conditionally Essential Amino Acids: Generally non-essential, but become critical through diet during illness or times of rapid growth.

Chapter 45

Sanatoriums & Clinics

Recommended Clinical Hours

Day Time: 9:00 to 12:00 & 14:00 to 16:00

Two Evenings per Week (Ideally Mondays and Thursdays)

Evening Time: 16:00 to 19:00

Weekends (Twice a Months on Saturdays): 9:00 to 12:00

Treatment Rooms: These should be mainly in their Colours, between Green and Blue. For example Green walls, and Blue ceilings.

The Usefulness & Practical Limitations of the Different Fields of Therapeutics in Health Sciences

It is certainly a naïve to think or expect that a particular therapeutics will treat a specific condition. It is therefore absurd to state that a single Therapy will treat a particular condition.

Hydrotherapy

Usefulness: All Conditions of Inflammation, and Toxaemia (Organic Disease).

Frequency of Treatments: Up to 3 times per week.

Osteopathy

Usefulness: All Conditions where either Muscle or Nerves need to relaxed, allowing for improved drainage, and allow the better operation and signalling in the nervous system wiring.

Frequency of Treatments: May be taken twice per week, but one a General Relaxing Treatment, the other a Corrective Treatment.

Neuropathy

Usefulness: All Conditions Related to the Working of the Nervous System.

Frequency of Treatments: Up to 3 times per week.

Acupuncture

Usefulness: The Greatest Usefulness of Acupuncture Is To Treat Tendonitis, such as; Tennis Elbow, and Golfers Elbow.

Frequency of Treatments: As a Good Rule 1 Treatment, to a maximum of 3.

If a Second Treatment, is needed, than this Only performed 9 days After the First Treatment. The third treatment, Only applied after 12 days after the second treatment.

Acupuncture stimulates the fine network of nerves running both in the skin and the deeper tissues. The impulses from these stimulated nerves then pass to both the spinal cord and the brain, blocking pain and altering the nervous systems control of other bodily organs such as the digestive, urinary and reproductive organs. Furthermore various Chemicals produced in the brain and spinal cord, known as Neurotransmitters, are increased in amount, these act as chemical messengers that regulate virtually every function of the body, including mood, sleep, pain, and movement. These chemicals have a variety of properties but are both natural painkillers and anti-inflammatory and healing agents. These chemicals then travel via nerves to the areas stimulated, **i.e. a painful knee, where they set about trying to reduce pain and heal the painful joint. Do Not Use Acupuncture to treat Organic Conditions, Organic Conditions Are Treated and Resolved with Hydropathy.**

Explaining the Therapeutic Method of Emunctology

> ***“Innovations in Science frequently gain ground only by displacing the conceptions which preceded them, and which served more or less directly as their foundation; but, if the view which I have here presented be considered a step in our understanding of the subject, I must beg leave to disclaim for it the title of innovation; for my conclusion consists in establishing the connexion and showing the compatibility of views which have hitherto been considered contrary; and the best possible justification of the eminent philosophers who advocated either one of the two contending theories is thus afforded by my reconciling their arguments with those of their equally illustrious opponents.’*** *- Professor Alexander William Williamson, FRS, FRSE, PCS, MRIA, in “Theory of ætherification”, The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science, 1850.*

"Has in the Oneness of the Living God the Christ Our Lord and Saviours, so it is in the oneness of comprehension and understanding in which those points of truth these authors all conclude and agree upon. And as a result on which they all agree, that point of agreement, that truth universal truth, that this book finds its essence and it is thus produced and given as a testimony that:

"The Lord He Is God", and the Lord walks with us everyday, even if you do not see Him, He Is with us, He Is with those who ask for Him for The Lord Is God of All Humankind. These are not vain words, but are those words from those who know The Lord, His Ways, His Coming. And many others whose names do not appear here but they know who they are. To all physicians, whose convictions regarding the soundness of principles set forth in this work, and whose fearless advocacy of therapy based on these principles have been a constant source of encouragement and inspiration to many." - in "The Lord He is God", Emunctology Principles and Foundations of the Emunctory System, 2021.

Only God Can Heal

"A significant event in the history of modem Medical Trade was the 1910 Flexner Report on Medical Education in the United States of America.

Abraham Flexner was sponsored by the American Medical Association (AMA), who were in turn Funded by Carnegie and Rockefeller (investors in the Pharmaceutical Industry), which recommended that Pharmaceutical Medicine be taught in Medical Schools, and that all health care practitioners should be "scientists, rigorously trained" in these schools.

This recommendation was accepted, excluding nutrition, natural healing, etc... from being taught. "Scientific Medicine" was "Drug Therapy", and since then Medical Schools have concentrated on Drug Therapy, backed up by Surgery. Nutrition and Natural Methods have been ignored.

The result has been Escalating Disease Rates. In 1936 the Labour Party Government introduced free Medical Service in New Zealand. They thought it would lead to an ideal society with perfect health. But a Medical Service wedded to Drugs and Surgery has Produced the Opposite; Steadily Increasing Disease Rates.

Do We Need Medical Care To Help Increase Disease Rates?

Dr Ulric Williams, MD, a surgeon in Wanganui Hospital thought otherwise.

He said: "Hospitals Are Disease Factories."

He once told me: "I never became a real doctor until I forgot 95% of what I learned at Edinburgh."

Edinburgh University, was considered the best medical school in the world.

People have eaten themselves into a state of affluent malnutrition on tempting, addictive, sweet tasting non-foods provided by food manufacturers.

They then turn to an obliging Medical Trade to take away their pains with Drugs and Surgery.

Dr Ulric Williams said:

> ***"Doctor means Teacher. A doctor's chief duty is to teach people how to be well."***

I went to him with arthritis in 1942, and stayed 2 months in his Residential Clinic, and came home in perfect health, better than I had ever known. We don't need medical training to learn how to get well and stay well. It is a simple secret. Dr Williams summed it up in a few basic rules.

His first rule of health was:

> ***"Never eat when you are not hungry. Man is the only animal that hasn't enough sense to stop eating when he is sick. If you get an infection, treat it as a Healing Crisis. Fast for 2 to 3 days, drink plenty of water, take some form of Vitamin C. Your body will use the fever to burn up toxic wastes and cleanse itself."***

Another rule concerning life-style:

> ***"Foods need to be fresh, natural, whole and simple. Food as God made it, not as man mucks about with it. Water to drink. Every other creature on earth is satisfied with water to quench its thirst. The most important food is oxygen. Without it we die in minutes, whereas we can live without water for days, and without food for weeks. The best way to increase oxygen intake is to exercise in fresh air."***

And the spiritual dimension:

> ***"Our whole self needs peace. Peace comes from thoughts of love, faith, and forgiveness. Faith means expecting good to happen, instead of expecting bad. Love means seeing good in all things, even things we don't like. To see good is the attitude of love. Forgiveness means saying: "It doesn't matter!" Forgiveness means saying to oneself: "If I forgive this person, God can use my forgiveness to put things right." Forgiveness means saying to oneself: "This person did the best they could with the knowledge and awareness and understanding they had at the time, I set them free from my condemnation"."***

Summed Up - The Secret of Health Lies In: What We Put In Our Mouths; The Exercise We Give our Legs; The Thoughts We Hold In Our Minds.

The human body is an incredibly marvellous instrument if we give it the respect it deserves in these areas. It Will Repay Us With Good Health.

In later years I interviewed some of Dr Ulric Williams, MD patients.

They said:

> *"He didn't only cure me, he changed my whole life!"*

He did this for me too. One day when I was out walking, I suddenly saw what was meant by his first words to me:

> *"The world is a beautiful and wonderful place. If you don't see it that way you are looking at it upside down."*

One day, walking along the ridge road, I began to think of the people who loved me. Ten people loved me very much.

It is said that for emotional health, people need to know that they are important to at least one person in the whole world. But many don't have even one person to love them. And I had 10! Suddenly I realised that I was lucky.

With this realisation came the understanding that happiness depends on what we look at. Change your way of looking!

The world is full of things both good and bad, beautiful and ugly.

If we look at the good things that make us happy; we will be happy.

If we look at the bad things that make us unhappy; we will be unhappy.

The choice is ours. We are free to be happy, or unhappy, whichever we choose.

There are clear advantages in choosing to see the good and be happy.

Unhappiness weakens our immune system and our whole body, whereas happiness heals both ourself and the people around us.

Thoughts Are A Creative Force. What We Pay Attention Grows and Develops.

If we pay attention to good, we are creating good.

If we pay attention to bad, we are increasing it.

To see good is the attitude of love.

We Must do 2 Things:

> *1. "We must believe in healing. We must believe that God loves us, that he wants to heal us, and that he can heal us. The only thing that can block this is our own fear." - Dr Ulric Williams, MD, in his first morning talks to the group*

2. The second requirement was to throw out all Fear and Resentment.
   Here was my opportunity to prove my faith.

I thought:

> ***"I believe that God loves me. I believe that He wants to heal me.***
> ***I believe that He can heal me. So what is there to worry about? Every time I am in pain, I will say out loud: All Is Well."***

I only had to say it twice. That same day the pain was much less.

I walked on air. I said: "All Is Well", again the next day, and at 10 AM the taut ropes in the small of my back had vanished and the pain had totally disappeared. I was healed, and I went home.

When I said goodbye I thanked the Dr Ulric Williams, MD, for curing me.

He said:

> ***"I didn't cure you, only God can heal. Actually what I did was to teach you how to cure yourself, and that will be useful to you all your life."***

And so it has been. For the next 14 years I had no pain anywhere in my body, and no other illness at all." - in "New Zealand's Greatest Doctor Ulric Williams Of Wanganui", 1998.

God Loves You

"I saw the love of God encircling the universe and man, filling all space, and that divine Love so permeated my own consciousness that I loved with Christ-like compassion everything I saw. This realisation of divine Love called into expression "The beauty of holiness, the perfection of being", which healed and regenerated and saved all who turned to me for help." - Mary Baker Eddy, in "The compilation Miscellaneous Documents Relating to Christian Science", 1999.

Christ's Faith

Read and Study or Analyse how the Master treated children, young people, during His Ministry in the Earth, it will be seen how oft He used children, the young people, as the hope of the world, as to how; unless each individual puts away those selfish desires which arise and becomes as little children, one may never quite understand the simplicity of Christ's Faith.

Christ-like faith, Christ-like simplicity, Christ-like forgiveness, Christ-like love, Christ-like helpfulness to others. Analyse these; and aid in ministering such to the young as a teacher, as an interpreter, as a helper for those of the young who seek to know, to interpret, to apply such in their experience. Yes, even learn how to interpret to children as to how an individual may pass the collection plate in church on Sunday and swear like a sailor on Monday.

Both are of God, one in the right direction, one in the opposite. These ye learned at the Master's feet. Keep the faith. Let that mind be the builder that is the intuitive force for the Christ-like hope of man.

For, If ye know the Truth and apply it not; it is sin.

"Therefore to him that knoweth to do good, and doeth it not, to him it is sin." *- James 4:17*

The LORD Speaks

For indeed the LORD Speaks throughout these pages.

Be blessed, for indeed He is mindful of you.

Know that thy body is indeed the temple of the living GOD.

There He has promised to meet thee, in thine own tabernacle, in thine own mental and spiritual self, in thine own temple.

There He would Commune with thee!

Keep the Mental Attitude in that way of Knowing in what there is:

Life, Light and Immortality.

It is not All of Death to Die; nor All of Life to Live.

When there is Sought that Peace with Him, this may be had.

For His Promises Are Sure.

God Is The Only Healer

"Teach your students the omnipotence of Truth, which illustrates the impotence of error.

The understanding, even in a degree, of the divine All-power destroys fear.

Human hate has no legitimate mandate and no kingdom.

Love is enthroned.

He, who understands the Principle of Mind-healing, points out to his student error as well as truth, the wrong as well as the right practice.

Love for God is the true incentive in both healing and teaching.

Love inspires, illumines, designates, and leads the way.

Love inspires, illumines, designates, and leads the way.

Right motives give pinions to thought, and strength and freedom to speech and action.

Love is priestess at the altar of Truth.

Wait patiently for divine Love to move upon the waters of mortal mind, and form the perfect concept.

Patience must "have her perfect work".

A mental state of self-condemnation and guilt or a faltering and doubting trust in Truth are unsuitable conditions for healing the sick.

You must utilize the moral might of Mind in order to walk over the waves of error.

If you are yourself lost in the belief and fear of disease or sin, and if, knowing the remedy, you fail to use the energies of Mind in your own behalf, you can exercise little or no power for others help.

> *"First cast out the beam out of thine own eye; and then shalt thou see clearly to cast out the mote out of thy brother's eye."* - *Matthew 7:5*

One must abide in the morale of truth or he cannot demonstrate the divine Principle. So shall the spiritual idea guide all right desires in their passage from sense to Soul, from a material sense of existence to the spiritual, up to the glory prepared for them who love God." - Mary Baker Eddy, in "Science and Health with Key to the Scriptures", 1875.

Life Is Spirit

"When we realize that Life is Spirit, never in nor of matter, this understanding will expand into self-completeness, finding all in God, good, and needing no other consciousness. Spirit and its formations are the only realities of being. Matter disappears under the microscope of Spirit." - Mary Baker Eddy, in "Science and Health with Key to the Scriptures", 1875.

We would give that the individual turn about in its application of itself to those channels, and outlets in which it may contribute to, and advise with.

Be patient with, and help those who are in varied stages of unfoldment, in a mental and spiritual application of tenets and Truths that constantly give individuals hope.

For So Long As: There Is Life; There Is Hope.

So Long As: There Is Hope; There Is Possibility.

So Long As: There Is Possibility; Love May Better Direct Rather Than Hate.

And Love Is God.

If God Is Present: There May Be Brought Opportunities For All; as well as for the one, in whom such manifestations may be made manifest.

For when an individual entity or soul has lost its faith in itself it is miserable.

You may encourage others. Do that gently, kindly, patiently, as only those may do who are well trained in purpose, hope, in body and in mind as the nurse, as the instructor or director in regard to such experiences in the lives of others. One May Contribute Much to the Comfort of Many who are under the disturbances of the environs without the full appreciation for the Needs of Cleanliness About, showing how that: The Lack of It Bring Disease, and Discouraging Forces. For Cleanliness Is Indeed Next To Godliness. Study, then: To Show Thyself Approved Unto God; A Workman Not Ashamed; Rightly Dividing the Words of Truth and keeping self Unspotted from the world.

Condemn Not, and ye will not be condemned. Bless, not merely those who bless you, but all of those who would seek: Truth, Knowledge, Understanding.

Chapter 46

Christ The Lord Speaks

"When we Lift our Minds to Spiritual Things, suddenly We Know the Master is beside us, the Power of the Father is within and all is well.

The Words Themselves Will Ring In Our Memories Forever, the Greatest Truth was shown, the Tremendous Force of the Presence of the Master.

- "My Peace I bring to you."

As the speaker progressed and we became more understanding, the greeting changed to:

- "My peace and my love I bring to you"; "My peace and my blessings I bring to you."

The Blessing was given with the 2 first fingers of the right hand raised in the manner of a King, and low our hearts bowed before its majesty.

A Quietness spread through the hall: a Vibrating Power like a stream of warmth passed through our bodies, burning wherever any part was imperfect, and Healing as it flowed.

As one talk followed the other, We Could Feel our own Vibrations Raised, and our Understanding Clarified, and lifted to a plane far beyond our everyday life.

In dawning comprehension, We Listened to Truths greater than any we had ever heard, and yet (to our wondering astonishment), we realised they were the same statements we had heard, and read since infancy.

But Only Now did We Understand their Meaning.

Suddenly the Lightning Truth flashed into our minds, and at last we knew the power of what the Master had first said so many years ago.

And then His Truths became, for us, Reality, part of our very being, to be held precious in a golden silence from now on into Eternity.

The Words Of The Lord

- "I Am Myself Resurrection and Life, he who believes in me will live even if he dies, and no one who lives and believes in me will ever die.

God Is Love, and Love Is God.

There is nothing that can interfere with the current of pure thought directed from Life, for really there is no distance; the only necessity is a condition of receptivity. It is now possible to receive this wonderful gift of the Father, that is being poured out eternally.

You can experience It for yourselves, by opening yourselves up to It.

You do not receive It from the external, only know that It is eagerly waiting to express Itself from the very centre of your being.

You must become consciously aware of It, and, when you are consciously aware of It, then you will experience It, in every cell of your body, in your surroundings, in your friends, in your business place, your home, all can be filled with It.

And there is nothing that can withstand It.

It is so solid in Its nature, that It interpenetrates every single particle of substance that exists in the Universe.

It supports the whole Universe, and It gives breath and life: "I am the Life and Love."

All your thoughts of Love and Healing, sent out even without any special direction are caught up in the stream, and they help all.

Remember, nothing is lost in this world of thought charged with Love.

Space is a wrong idea; it belongs to separation, but in Reality There Is No Separation.

Let your hearts and minds rest undisturbed in the realisation of the omnipresence of God.

Even the child will come to know that there is no space or distance, for you all dwell in God and there is absolutely nothing outside God.

By my own experiences, I found that the flesh changes through the conscious awareness of the Divine Essence of Love.

It is the Power that creates all things, and attracts everything to It.

For God who made the world and all things therein, and Who is the Lord of Heaven and Earth, does not dwell in temples made with hands, neither is ministered unto by human hands, nor is He in need of anything, for it is He who gave Life and breath to all men.

And He has made of one blood all nations for to dwell on the face of the earth, so that they should seek and search after God and find Him by means of His Love and His Creations.

He is not far from anyone of you.

For in Him all live and move and have their being, and, as some of your wise men have said, "all are His kindred" Yes, when you have seen me you have seen the Father. There is no mystery about these words when you thoroughly understand them. The mystery disappears when they are understood.

To live in the spiritual is to live in Reality, not spasmodically and in limits.

How can there be any time or space in Infinity?

Know that you live in the Mind of God that fills all space, for there is nowhere where It is not. "I am" the Lord, "I" change not.

The only way that you can convey to the mind something that is indescribable is by means of giving the key so that you can open the door yourselves, and this is the meaning of the words: "And a voice came from heaven."

What are you conscious of? Think for a moment!

Are you just conscious of yourselves, conscious of things external, conscious of what you see and hear with your eyes and ears? Or are you conscious of an inner voice, which is waiting to reveal Itself to you, revealing its greatness, Its mighty power in your lives? Learn first and thoroughly that "you are" and will be forever. Your present condition is an opportunity for Spiritual advancement.

The condition in which you are in at the present time is one that is most necessary. When you come to learn the great Truth that Spirit is all there is, and that there can be nothing but Spirit, the scales fall from your eyes.

The real is in the Spiritual plane and exists there as your true self.

The outer is but a copy, and is blurred by the artistry of the mind reacting to the external world through the senses. Allow the real within to manifest in the outer, Its wondrous power of Love and Peace.

The Creative Principle existing throughout the whole Universe is invisible to the eyes of humans, invisible to the eyes of Angels, yet it exists as the only Reality in all, as the building process, the Creative Principle in everything, and through it all visible things must come.

Then do not blur the outer through ignorance and fear.

When you pray earnestly in this "knowing" in secret, in the quiet of your own soul, the whole Universe is brought into action to create and express that which you ask.

All Real Prayers Are Answered Instantly.

You must practice praying, practice praying in secret with your mind at peace. Believe you have received, and you shall have. Whatever you do, do it with sincerity. Be kind and affectionate to one another, and show your mercy with cheerfulness, for mercy is a reward of greatness, It shows the Consciousness of the Christ within. It shows that the outer is being influenced by the Living Christ that dwells in the Kingdom of heaven within.

In business do not be slothful or deceitful, but Serving with Honour, and live in peace with all whom you serve, and with them who serve you. For it is written in the Kingdom of Heaven, He that is greatest is the servant of all."- Christ the Lord, in "Divine Healing of Mind and Body: The Master Speaks Again", 1953.

Let always; that light which has oft guided thee, be the promptings through thy activity. Forget not to pray oft.

And let thy prayer be oft, but in thy own words:

> ***"Lord, Here Am I! Use Me As Thou Seest Fit. Let Me Be Willing, O God, To Be That Thou Would Have Me Be. That I May Bring Glory To The Son; Who Is The Way For All."***

What Is Light

Who is the author of life?

Who is the Saviour of life?

Who gave His life that ye might have life more abundant?

What is light and life in the earth?

If you cannot answer these within yourself, you are far, far from knowing the way home. For the soul seeks its own; in Him, who is the light, the life, the way.

Do study creation, man's relationship to God.

What is light, that came into the earth, as described in the 3rd verse of Genesis 1? :

> ***"And God said, Let there be light: and there was light." - Genesis 1:3***

Find that light in self.

It isn't the light of the noonday sun, nor the moon, but rather of the Son of man.

For He came as those activities when man was in the beginning of what we have recorded as that God brought light.

What is Light, then, in that sense?

In that city, in that place, there is no need of the sun, nor of the moon, nor the stars; for He is the Light; He Is Light, and in Him is no darkness at all!

What is light? Even Jesus the Christ!

What is the knowledge?

All knowledge, all power, has been given into His keeping. For He Is the light, He Is the way, He Is the truth, He Is the power!

They that seek to use same will find, as He has given: "If you love me, ye keep my commandments. And my commandments are not grievous, rather that ye love one another, even as I have loved thee."

Thus there may be light; not by preaching in thy experience, not by the lording over others, but rather by

Being that which has been indicated in the experiences of each.

Thus may ye make for a feeling, an awareness, of the presence of power, the presence of beauty, the presence of patience, the presence of kindness; and, as the complement to same, brotherly love, understanding, the awareness of strength, the awareness of continuity of thought, of life, of hope, of those things that are but expressions of that power which is manifested in the life of Jesus, the Christ.

What is light?

That from which, through which, in which may be found all things, out of which all things come. Thus the first of everything that may be visible, in earth, in heaven, in space, is of that light; Is that light!

"Once, when thought came to me of the things that are and my thinking soared high and my bodily senses were restrained, like someone heavy with sleep from too much eating or toil of the body, an enormous being completely unbounded in size seemed to appear to me and call my name and say to me: "What do you want to hear and see; what do you want to learn and know from your understanding?"
"Who are you?" I asked.
"I am Poimandres, Mind of Sovereignty; I know what you want, and I am with you everywhere.
I said: "I wish to learn about the things that are, to understand their nature and to know god. How much I want to hear!" I said.
Then he said to me: "Keep in mind all that you wish to learn, and I will teach you."
Saying this, he changed his appearance, and in an instant everything was immediately opened to me. I saw an endless vision in which everything became light - clear and joyful - and in seeing the vision I came to love it. After a little while, darkness arose separately and descended - fearful and gloomy - coiling sinuously so that it looked to me like a (snake). Then the darkness changed into something of a watery nature, indescribably agitated and smoking like a fire; it produced an unspeakable wailing roar. Then an inarticulate cry like the voice of fire came forth from it. But from the light... a holy word mounted upon the (watery) nature, and untempered fire leapt up from the watery nature to the height above. The fire was nimble and piercing and active as well, and because the air was light it followed after spirit and rose up to the fire away from earth and water so that it seemed suspended from the fire. Earth and water stayed behind, mixed with one another, so that (earth) could not be distinguished from water, but they were stirred to hear by the spiritual word that moved upon them.

Poimandres said to me: "Have you understood what this vision means?"

"I shall come to know", said I.

"I am the Light you saw, Mind, your God, who existed before the watery nature that appeared out of darkness. The light-giving Word, who comes from Mind is the Son of God. This is what you must know: that in you which sees and hears is the word of the lord, but your mind is god the father; they are not divided from one another for their union is life. Understand the light, then, and recognise it." - The vision of Hermes Trismegistus, meeting Poimandres, the Mind of Sovereignty, in "The Discourse of Poimandres."

All Healing Most Come From the Divine

That Emunctology has an institution Is the Ideal manner goes without question; for there is good in All methods; and they have their place.

But from whence comes the healing?

Whether there is administered a drug, a correcting or an adjustment of a subluxation, or the alleviating of a strain upon the muscles, or the revivifying through electrical forces; they are One, and the healing comes from Within.

Not by the method does the healing come, though the consciousness of the individual Is such that this or that method Is the one that is more effective in the individual case in arousing the forces from within. But Methods are Not ideals. The Ideal must be kept in the proper Source; and then this idea may be gradually instilled into the laity in such measures and manners that there may be gradually builded that which would stand as an ideal manner.

All healing of Any nature: All healing must come from the divine; else there is no healing. Remember, healing; all healing comes from within.

Yet there is the healing of the physical, there is the healing of the mental, there is the correct direction from the spirit. Coordinate these and you'll be whole! As all healing must come from the divine, then the faith, the hope, the purpose must be in that divine presence that maketh All things possible. For all healing must come from the Mental Attitude of the body.

> ***"The Lord hath created the physician, and of the most High Cometh Healing. The Lord hath created medicines out of the earth; and he that is wise will not abhor them. Of such doth the apothecary make a confection; and of his works there is no end; and from him is peace over all the earth. In thy sickness be not negligent; but pray unto the Lord, and he will make thee whole." - "*** *- Ecclesiasticus 38:1-2*

The Principle of Divine Healing

"In 1866, while living in Lynn, Mass., Mrs. Eddy met with a severe Accident, and her case was pronounced hopeless by the physicians.

There came a Sunday morning when her pastor came to bid her goodbye before proceeding to his morning service, as there was no probability that she would be alive at its close.

During this time she suddenly became aware of a divine illumination and ministration.

She requested those with her to withdraw, and reluctantly they did so, believing her delirious. Soon, to their bewilderment and fright, she walked into the adjoining room:

> ***"and they thought I had died, and that it was my apparition."***

From that hour dated her conviction of the Principle of Divine Healing, and that it is as true today as it was in the days when Jesus of Nazareth walked the earth.

> *"I felt that the Divine Spirit had wrought a miracle. How, I could not tell, but later I found it to be in perfect scientific accord with the divine law."*

From 1866 to 1869 Mrs. Eddy withdrew from the world to meditate, to pray, to search the Scriptures.

> *"During this time, the Bible was my only textbook. It answered my questions as to the process by which I was restored to health; it came to me with a new meaning, and suddenly I apprehended the spiritual meaning of the teaching of Jesus and the Principle and the law involved in spiritual Science and metaphysical healing; in a word: Christian Science."*

Mrs. Eddy came to perceive that Christ's healing was not miraculous, but was simply a natural fulfilment of divine law; a law as operative in the world today as it was nineteen hundred years ago.

> *"Divine Science is begotten of spirituality, since only the "pure in heart" can see God."*

In writing of this experience, Mrs. Eddy has said:

> *"I had learned that thought must be spiritualized in order to apprehend Spirit. It must become honest, unselfish, and pure, in order to have the least understanding of God in divine Science. The first must become last. Our reliance upon material things must be transferred to a perception of and dependence on spiritual things. For Spirit to be supreme in demonstration, it must be supreme in our affections, and we must be clad with divine power. I had learned that Mind reconstructed the body, and that nothing else could. All Science is a revelation."*

Through Homeopathy, too, Mrs. Eddy became convinced of the Principle of Mind-healing, discovering that the more attenuated the drug, the more potent was its effects." - Mary Baker Eddy, in "Pulpit and Press", 1895.

> *"Where wast thou when I laid the foundations of the earth? declare, if thou hast understanding. Who hath laid the measures thereof, if thou knowest? or who hath stretched the line upon it? Whereupon are the foundations thereof fastened? or who laid the corner stone thereof; When the morning stars sang together, and all the sons of God shouted for joy?" - Job 38:4-7*

"Heaven Represents Harmony; And Divine Science interprets the Principle of Heavenly Harmony. *The great miracle, to human sense;* ***is Divine Love, and the grand necessity of existence is to gain the true idea of what constitutes the kingdom of heaven in man.*** *This goal is never reached:* ***While man hates his neighbour, or entertain a false estimate of anyone whom God has appointed to voice His Word. And, without a correct sense of its highest visible idea, we can never understand the Divine Principle."*** *- Mary Baker Eddy, in "Science and Health with Key to the Scriptures", 1875.*

"A woman called upon a Christian Science practitioner, explaining that she wanted only to spend some time in the consideration of ***Spiritual Truths****, in the contemplation of heavenly verities. She did not mention that for many months she had suffered from a sore on her body, which was causing her considerable pain. For an hour the two women discussed Christian Science. They understandingly affirmed that since man is the image, and likeness of God, "So God created man in his own image, in the image of God created he him." - Genesis 1:27; His activities and functions are under the control of God, Divine Principle. They acknowledged that the spiritual energies of Life, God, are eternally present with the real man, revealing to him his heavenly heritage; his divine ancestry; his glorious history; that in* ***the beatified state of spiritual understanding is the revelation of uninterrupted bliss, incorruptible health, endless life.*** *They saw that* ***man is at one with His Creator in the expression and experience of all good;*** *that* ***man is neither the victim nor the agent of evil, but is constantly maintained by the ever-operative law of divine Love. When the patient left the practitioner's office, she had gained the calm assurance that all is well, now and eternally. She knew that the fullness of Love understood, of Life glorified, of Truth demonstrated, was hers to enjoy here and now. "Behold, the kingdom of God is within you." - Luke 17:21; Man is never retrogressive, never stagnant, but is ever unfolding the beauty of his holy source. No sinful, ignorant, fearful beliefs can blind him to his changeless health and holiness, his incorruptible substance, his true identity as the reflection of God, his perfect status as an inhabitant of the kingdom of God. Let us recognise "the grand necessity of existence", and gain an increasingly clear understanding of the Heavenly Kingdom, through the consciousness of reality, of the presence of harmony here and now."*** *- in "The Grand Necessity of Existence", The Christian Science Journal, March 1958.*

"The days of our pilgrimage will multiply instead of diminish, when God's Kingdom comes on earth. For the true way leads to Life instead of to death, and earthly experience discloses the finity of error and the infinite capacities of Truth, in which God gives man dominion over all the earth." *- Mary Baker Eddy, in "Science and Health with Key to the Scriptures", 1875.*

Emunctology A Gift From God to Man

For God is mindful of thee; Art thou mindful of Him?

"Honour a physician with the honour due unto him for the uses which ye may have of him: for the Lord hath created him. For of the most High cometh healing, and he shall receive honour of the king. The skill of the physician shall lift up his head: and in the sight of great men he shall be in admiration. The Lord hath created medicines out of the earth; and he that is wise will not abhor them. Was not the water made sweet with wood, that the virtue thereof might be known? And he hath given men skill, that he might be honoured in his marvellous works. With such doth he heal men, and taketh away their pains. Of such doth the apothecary make a confection; and of his works there is no end; and from him is peace over all the earth, My son, in thy sickness be not negligent: but pray unto the Lord, and he will make thee whole. Leave off from sin, and order thine hands aright, and cleanse thy heart from all wickedness. Give a sweet savour, and a memorial of fine flour; and make a fat offering, as not being. Then give place to the physician, for the Lord hath created him: let him not go from thee, for thou hast need of him. There is a time when in their hands there is good success. For they shall also pray unto the Lord, that he would prosper that, which they give for ease and remedy to prolong life. He that sinneth before his Maker, let him fall into the hand of the physician." - Ecclesiasticus, 38:1-15.

"If someone is able, to show me that what I think or do is not right, I will happily change. For I seek the Truth, by which no one was ever truly harmed. It is the person who continues in his self-deception, and ignorance who is harmed." *- Marcus Aurelius, Roman Emperor, in "Meditations", Book 6, 21*

"When One Is Confronted With a Fact which is in Opposition with a Prevalent theory, One Must Accept this Fact, and Abandon the Theory, *even though the latter, supported by great men, may be generally subscribed to." - Professor Claude Bernard, Physiologist, considered "one of the greatest of all men of science", he originated the term "Milieu Intérieur" to describe the interstitial fluid and its physiological capacity to ensure protective stability for the tissues and organs of multicellular organisms, and the associated concept of Homeostasis; quoted in "Biological Transmutations", 1963.*

"Give, and take, and sanctify thy soul; for there is no seeking of dainties in the grave. All flesh waxeth old as a garment: for the covenant from the beginning is, Thou shalt die the death. As of the green leaves on a thick tree, some fall, and some grow; so is the generation of flesh and blood, one cometh to an end, and another is born. Every work rotteth and consumeth away, and the worker thereof shall go withal. Blessed is the man that doth meditate good things in wisdom, and that reasoneth of holy things by his understanding. He that considereth her ways in his heart shall also have understanding in her secrets. Go after her as one that traceth, and lie in wait in her ways. He that prieth in at her windows shall also hearken at her doors." - Ecclesiasticus -14:16-23

Do Not Force An Issue With Anyone

In this are the presentation of the Truths as are manifest in the physical world that are loathe to be gathered in a physical experience; for as is seen, the Forces which are manifest to bring the relief to physical force are not of a one faith; but a Oneness in Faith in the God Force manifest in the individual. Study then these Truths, for they remain a Oneness, whether: Jewish, Gentile, Greek or Heathen.

All Healing Comes From The Divine Within

All Healing Comes From The Divine Within, that is creative.

Thus, if one would correct physical or mental disturbances, it is necessary to change the attitude and to let the life forces become constructive and not destructive. Hate, malice and jealousy only creates poisons within the minds, souls and bodies of people.

Thus, let the mental forces know, not only that there may be help; by following the Therapeutic suggestions by Emunctology; but that the source of all healing comes from within.

Therapies are not curative; they are to Prepare the body; that the cure may be produced By the activity of the system itself! For it is in its very nature Creative!

Give it the opportunity to create, to reproduce Constructive forces; physically, mentally. These arise from the spiritual forces within the body itself.

The Emunctology Oath

"Emunctology Is The Gift of God: For The Healing of His Creation.
I Will Use Emunctology in the Treatments of the Seeker; in according to both my Ability and Judgement; but Never with a view to injury or wrongdoing.
I Will Keep Pure, and Holy Both my Life and my Art." - The Emunctology Oath

Christ-Consciousness

Then, Keep the Christ-Consciousness; knowing that: All Healing Comes Through Spiritual Forces. For, He Is the Way and the Truth and the Light.

"Who healeth all thy diseases." *- Psalm 103:3*

All Healing Comes From His Power; as may be manifested in the earth through individual application to those phases of experience of individuals.

For, Remember from Whom, through Whom All Life, All Healing Comes.

The Mental Attitude

As to the Mental Attitude of the body throughout the applications; through means of the Therapeutic Methods as necessary:

Know that the help, the aid, must be first Mental, and within self; and that all healing comes from Constructive, Spiritual Forces within self; and that with the changes wrought, these are not to be made for self-aggrandizement; self-indulgences; but that the Spirit of Truth, of Good, of Love, of Patience, of Reproduction, may be fully accomplished; that the body, in mind, in body, in spirit, may fill that for which it came into the material experience in the present.

The Role Consciousness Plays in Healing

Unity was founded on spiritual principles of healing.

All forms of Healing: physical, mental. God is continually giving you the gift of health, and you experience that giving as the desire for health.

There are even times when a profound healing coincides with death.

Unity co-founder Myrtle Fillmore was 40 years when Medical Trade doctors told her she had 6 months to live. Myrtle was sickly as a child and a young adult, suffering from Tuberculosis. After attending a "New Thought" lecture in 1886, Myrtle came away with one statement that changed her life: "I am a child of God, and therefore I do not inherit sickness."

"Show the Father that you are ready to do your best, and He will keep increasing your ability and will place you where you will be blessed and where your work will bless others. I try to draw very close to God and rest in the assurance that all is well. I know that God would not have me struggle with unknown things, or talk of that which I have not proved. I realise that that which God would have me do God inspires in me, that it is very easy to do God's will, and that when I thus conduct myself, a great peace and friendliness comes and abides. We must have quiet and opportunity for inward searching, for we must go beyond what we have heretofore attained. There is nothing in hearsay or in observation or in the evidence of the senses, apart from spiritual

discernment, that can take us beyond our present footing. I know I must be beautiful within, and in my fellowship with others, and in my sharing with them the good things of life if I am to become beautiful without. Anything that makes me have the feeling of selfishness cannot result in more beauty to me. Anything that awakens in me the loving desire to have others happy and adorned with beautiful things, and anything that helps me to express this loving desire in my living is sure to bring forth its fruit in my life.

You ask what restored me to vigorous health?

It was a change of mind from the old, carnal mind that believes in sickness to the Christ Mind of life and permanent health.

> ***"Be ye transformed by the renewing of your mind." - Romans 12:2***

> ***"As he thinketh in his heart, so is he." - Proverbs 23:7***

I applied Spiritual Laws effectively, blessing my Body Temple until it manifested the innate Health of Spirit. These wonderful laws will work for you too when you apply them diligently and in faith. We should keep to Christ, as the source of our light and the application of His teaching as the way of life. We should give God the glory for any and all good in our lives, and emphasise the Truth that it is God's working in and through us that does the transforming.

God is Eternal; Unchanging Good; and you have access to all that God is and has.

> ***"I will restore to you the years that the locust hath eaten."*** - Joel 2:25

God is ever giving just what we expect.

Christ is in our midst, and we can receive instruction direct from Him if we ask; and agree to carry out in our lives what He teaches. We should ask Christ and He will show us the Truth.

We should always have Christ as the source of our inspiration and prosperity.

> ***"To whom God would make known what is the riches of the glory of this mystery among the Gentiles; which is Christ in you, the hope of glory."*** *- Colossians 1:27*

He is alive today. He is with us now.

His words:

> ***"Lo, I am with you always, even unto the end of the world."*** *- Matthew 28:20*

Are His living promise to each of us. The Christ presence within our own souls is the Great Physician who has wisdom and power to heal and to adjust in divine order every function of our body temples. Turning within to Him, we receive that guidance, that assurance, that healing for which our souls long, the, prospering and success for which we not only long, but need to express as sons and daughters of the Most High, heir to all that the Father has.

Be in touch with Him and lay hold of Him and build our lives according to His Pattern.

The Christ Mind gives us an idea in its entirety and then we work it out in our own consciousness and body and affairs.

Love unifies us with God, our Source, and we know that we are good and true and fearless from within. Jesus is the individual who made the complete union of mind, soul, and body in Spirit.

He Brought forth into expression the Christ, the God Mind within, and consciously identified Himself with the Father. "God Is Spirit."

We can quicken our own Christ Mind by dwelling upon the Truth that we are one with God. We need to harmonise our thinking and our prayers with actual living experiences.

> ***"Know ye not that your body is the temple of the Holy Ghost which is in you, which ye have of God, and ye are not your own? For ye are bought with a price: therefore glorify God in your body, and in your spirit, which are God's."*** *- 1 Corinthians 6:19-20*

Where would we send our prayers?

We should direct them to our minds and hearts and affairs.

We commune with God-Mind within our own consciousness.

Thoughts Are Things

For All Thought Is Formative; All Thought Has Its Effect In Our Lives.

We Have a Very Decided Part

We are to cease worrying, and being anxious, and thinking and speaking of the past and of the apparent lack and idleness.

We are to concentrate all our attention upon the Truth of God, and the truth of our own being, upon the very things we would see taking place in our lives.

We cannot do this so long as we have negative thoughts in our hearts.

As we pray, the word of life is going into us, breaking up old fixed beliefs and reorganising our lives.

The word of life — life as God has planned it — is taking hold of our subconsciousness, and we know that we are free and will begin to use our freedom. Working in the consciousness of freedom, we will be happy and well and busy and prosperous.

"With God all things are possible." *- Matthew 19:26*

It lifts the individual into a wonderful sense of Oneness With God, who is Spirit, the source of every good and perfect thing, and the substance that supplies all the child's needs; whether they are: Spiritual, Social, Mental, Physical, or Financial.

Positive Declaration of the Truth of One's Unity With God sets up a new Current of Thought Power, which delivers one from old beliefs and their depression.

And when the soul is lifted up, and comes positive, the body and the affairs are readily healed." - in "Myrtle Fillmore's healing letters", 2009.

"1. Unite All Areas of Your Life

There are 3 realms that must be addressed for healing to occur: Daily declare that your spiritual life and world, your mental life and world, your physical life and world are unified and that you are expressing harmoniously the ideas of the Christ mind on these 3 planes:

> ***"I applied spiritual laws effectively, blessing my body temple until it manifested the innate health of Spirit."***

2. Have Immense Faith That You Can Be Healed

> ***"It was a change of mind from the old, carnal mind that believes in sickness to the Christ Mind of life and permanent health... I applied spiritual laws effectively, blessing my body temple until it manifested the innate health of Spirit."***

3. Turn Inward

> ***"Sometimes we pray to a God outside of ourselves. It is the God in the midst of us that frees and heals... You need to think of God, the all-powerful Healer, as being already within you, in every part of your mind, heart, and body."***

4. Be Optimistic: Positive thoughts help replace old ways of thinking and quicken healing

> ***"Prayer is an exercise to change our thought habits and our living habits... When some of our thought energy is expended in negative beliefs and feelings... we get those old negative results."***

5. Rest Every Day: times of rest and rejuvenation feed the soul

> ***"A period of quiet and rest each day is your opportunity to establish yourself at the center of your being, the one place where the supply of life and substance is inexhaustible."***

6. Take Care of Your Body by maintaining a healthy lifestyle; eating healthy, exercise and rest.

> ***"The body responds to changes of the mind; and when this is accompanied by truly wise living habits, the conformity to true ideas... will renew it and make it every whit whole."***

7. Bless Your Body; you must express gratitude for the body regularly

> ***"Our first duty, then, is to bless our body... to praise its wonderful work, to learn what its needs are, and to supply them.'*** - in "Myrtle Fillmore's Healing Letters", 2009.

Unity is a field of endeavour.
The Truth, as in Him, is the way!
The church is in thyself. For, thy body is the Temple of the living God.
There He hath promised to meet thee.
Hence not in an organisation, not in a name, not in a title; for there is only One Name given under heaven, whereby men may be saved, and He hath promised:

> *"If ye love me, ye and keep my commandments. I will come and abide with thee." - John 14:23*

Make that not merely a saying, that may be passed by, but as ye are practical: Live it! As ye are loving: Do it! As ye are kind: Live it in Every way.
That is the Christ way; and bespeaks Unity of Purpose with all that would do good. It is Unity of Purpose, Unity of Application, that will bring the desired efforts to those that seek as those that would obtain.

The Power of Mind over Body

Through hours of meditation and prayer, focused on the power of Divine Healing, she recovered after 2 years. She and Charles founded Unity in 1889 to share what they were learning about The Power of Mind Over Body, and The Role Consciousness Plays in Healing.

You Can Be Healed

“Realising my Divine Nature I am Healed: I release any belief in limited health or well-being. Instead, I turn my mind toward the knowledge of my divine nature. God’s life is my life. I claim vitality and wholeness, strength, and well-being. I heal by realising my true nature and living fully, starting with this moment of conscious prayer. Mighty currents of God’s healing love flow through me now, renewing and restoring every fibre of my being. I am whole, well, and free.” - in “Unity School of Christianity”

Affirmations for Healing

1. Create in me, o Father! that peace, that harmony, that love, that will bring the comprehension of Thy love, Thy mercy, Thy grace, in me, in my being, just now.

2. As I seek, wilt Thou harken, o Father of mercy, and in the promises that were given by, and through the Christ in the earth, make me whole every whit; now.

3. As I come to Thee, o Father! seeking to know Thy love, Thy grace, Thy power, may I see this love, this power, this mercy; thou hast promised through Thy Son, in me; just now.

4. Our Father, in Thy mercy help me to so live, to so keep my inner self in accord with Thy law, Thy love, as to merit these being manifested in my life, my body; just now.

5. Our Father, our God, in Thy manifestations of love, remember me; just now.

Pursuing Truth

The Pursuit of Truth is a Pillar of a Just and Thriving Society. It is a commitment to Open Inquiry, challenging individuals to Seek Reality; over Convenient Lies.

What Is Gospel?

News, tidings, understandings; that which bespeaks the sounding of warning, knowledge, awakening; if there will be the considering in the mind of the hearer. Gospel. Glad tidings.

What Is Truth?

That which makes aware of the divine within each and every activity; that is of the mental, the material, the spiritual self; and is a growth in each and every soul.

It Is In The Application That Ye Know Truth

Thus the Pursuing Truth, which is the Gospel of Christ; which was given; from that angle of who asked, and the answer Lived by Him who would not answer the question verbally but answered it in His giving to man; the pattern, the manner in which he is to approach and seek and know and apply.

For it's in the application that ye know truth.

In The Application of That Being Presented

Let that thou doest in thine application of that being presented thee, for the edification of thy brethren, be done in humbleness of heart, in singleness of purpose, in service Through thy Lord's meeting oft with thee. And as ye do it in this manner will He abide closer, closer; The Lord, to thee.

Let thy Prayer and thy Meditation be:

> *"In Thee, o Lord, do I trust. In Thee will I put my faith, my hope, my all."*

The Destiny of the Body

As to how there are the manifestations of those things in the earth that become the expressions of the movement of the spirit bringing into being; that which is matter in its various expressions. How that matter in its group form, or in its various forms, appears, disappears, dissipates into that from which it came.

In man, as we find, the soul, the individuality of the soul, becomes more and more apparent through the manner of life; or manner of its expressions in its activity, in its awareness within whatever sphere of activity in which it may find itself.

Hence, as we find, of man; upon whom much has been bestowed; much is required. In all the universe, the celestial, the terrestrial forces, in Summer, in Fall, in Winter, in Spring, in Every manifestation we find the beauty of the Lord, of the Christ; the Glory of those.

Only in man may we see; through his relationships to his brother; selfishness, uncomeliness, the desire for self-aggrandizement or for self's own gratification without thought or concept of what may be the result of its activity.

Hence man in his destiny makes for, in the body, that which he as an individual, as a personality, must meet in personality or in the flesh; or in the manifestations of same, with the awareness of that as may be builded in and through those various activities through which the body in its varied environments, its varied activities, may find itself. And what makes for the change? Will!

What Is Will?

That which makes for the dividing line between the finite and the infinite, the divine and the wholly human, the carnal and the spiritual.

For the Will may be:

1. Made one With Him; or
2. For Self Alone.

With the Will, then, does man destine in the activities of a material experience how he shall make for the relationships with Truth.

What Is Truth And Life?

That which makes aware to the inmost self or the soul the Divine and its purposes with that soul. So does the body; whether it is sown in this or that environ, this or that plane of activity; become one with His purposes, through the making of the will one with the spiritual import or activity; or it makes for the separations; that are to be met only in the material experience.

Hence the necessity; hence the judgement; hence the mercy, the justice shown by the All-Wise Creative Force; that is so beautifully illustrated in the Spring, the Summer, the Fall, the Winter; the returning again and again of the body of man for its purification.

Has not man demonstrated how that the elements in the earth are purged of the dross by the fires of the furnace for their purification?

Have not the weaklings in the flock, or the unhealthy plants been made sturdy in their relationships of beauty in nature, by purging, pruning, and making for those advancements again and again?

And yet some deny that the All-Wise, the All-Merciful Father; would be so gracious to the sons of men who have erred in this a little thing!

What hath the Maker of the heavens and the earth said?

They that are guilty of the least are guilty of them all!

So, in the Destiny of thy Body, make the Will; How?

Through the Mind of the Body! At-one with Him; knowing in thine self that what has been set, what is Is; as God.

Yet in Christ may ye meet Every trial, every temptation.

For how hath He spoken?

That though offenses must come; and woe be to those by whom they come! He hath not allowed those to be tempted beyond that; in the body; above that which they are Able to bear. How Great, then, is the trust that He hath put in thee, that Thou should bear the glad tidings of a Risen Lord, an Alive God in thine own experience! Ye that have chosen Him, as He hath chosen you, to be lights unto the sons of men. Quit ye yourselves, then, as He hath trusted in thee; trust Ye in Him! Truth indeed; Truth is the unalterable, unchangeable law, ever. What is truth? Law! What is Law? Love. What is love? God.

What is God? Law and love. These are as the cycle of truth itself.

And wherever ye are, in whatever clime, its ever the same.

For, as it is said of him, He is the same yesterday, today and forever; unalterable!

Not as the Medes and Persians that were built upon fallible conditions, but as:

"I AM That I AM!"

That is true. Search it in thy inner self. Cultivate it in thy mind and it will alter the results in thy physical being. Yes, ye will have much to live for.

For everyone will be your friend, as ye have something to give to everyone.

Not as that which brings fault or brings want, and indeed makes an individual poor, but that which is a blessing to the mind and to the soul, by giving grains of truth that take from no one, but add something to everyone.

"Heal the sick, cleanse the lepers, raise the dead, cast out devils; freely ye have received, freely give." *- Matthew 10:8*

"If ye know these things, happy are ye if ye do them." *- John 13:17*

"Ye are the salt of the earth; but if the salt have lost his savour, wherewith shall it be salted? it is thenceforth good for nothing, but to be cast out, and to be trodden under foot of men. Ye are the light of the world. A city that is set on an hill cannot be hid.
Neither do men light a candle, and put it under a bushel, but on a candlestick; and it giveth light unto all that are in the house.
Let your light so shine before men, that they may see your good works, and glorify your Father which is in heaven." *- Matthew 5:13-16*

"Take heed to the ministry which thou hast received in the Lord, that thou fulfil it." *- Colossians 4:17*

Sow The Seed of The Spirit of Truth

"Thus seek what is the will of the Father concerning thine individual self, to sow the seed of the spirit of truth; just being kind, patient, showing brotherly love, longsuffering, being gracious.

This is sowing the seed, this is the will of the Father.

For he that loveth his brother, his neighbour, yea his enemy, is a brother to The Lord: The Lord Who Is The Son; Who Is The Saviour; Who Is The Spirit of Truth And Purpose.

As these are applied in relationships to others we come to those questions that have been indicated; when ye shall stand before the throne of mercy, the throne of grace.

> *"Inasmuch as ye have done unto one of these, even my little ones, ye have done unto me." - Matthew 25:40*

Visiting the sick, the imprisoned, supplying those needs in the way of speaking gently, being patient with the froward as these are applied they bring peace into the heart, into the soul of the individual.

For as He gave, only through the seed of the spirit may ye overcome the world even as He overcame the world. And the things of the world are to be used as in glory to the Father, and in honour to self.

Then, make the paths straight; just being patient, just being kind, just showing brotherly love.

Then the individual may find in itself its relationship to others.

Then speak oft with Thy Lord; as ye would speak to thy brother.

Oft approach Him in these manners, though in thine own words:

"Father, God! Thou who hast Given Heaven and Earth to man!

We Thy Children Have Wandered Far Away, and yet in the promise of The Christ, The Saviour, we may Come to Thee; and Ask that which is the desire of our hearts in Thy Cause. And He has promised, O God, to answer; in the measure we mete to our fellow man. Show Thou me, O God, the Way.

Let my life, my purpose, my body, my mind, be dedicated to the Love of my fellow man, in the same way as The Master, The Christ, would have me do. Lead, O Lord! I Will Follow Where Thou Leadest"." - in "Creation", The Book of Emmanuel or God among men

"I have planted, Apollos watered; but God gave the increase." *- 1 Corinthians 3:6*

Healing Through The Spiritual Path

> *"God created humans being to be Beautiful, Good and Healthy. That is how He wants humankind to be. Originally, people were Connected to God; there was only Love, Harmony and Health, it was All One. To be rich means to be healthy. Money is mighty. Health is almighty. If you want to have your health, then stop all the complaints! Speaking complaints leads to failure. Put hatred and envy aside, because you live the way you are. Hatred and envy bring about quarrels and arguments. What you take in, what you accept, that is what you have. If you always only took in the good, and put evil aside, you would always have the good. A person acts according to their will. As the will, so the thought. Your thoughts form your life, and the way you live it. Whoever abandons God, is abandoned. Whoever holds onto God, holds onto themselves. Where his connection to God does not hold, he falls. Being Connected to God; this Is Everything! If you want to experience the divine, you have to strive for it. Back to nature! Back to God! Back to the belief in the goodness in man! Whoever has received help should thank the Lord for it. For indeed, spirit rules matter; and continuous good overcomes evil. Go then from the path of suffering to the divine path! On this path there is no misfortune, no pain, no incurable, everything is good here. This path leads back to God! Man is a creature of love. What has been created in love, can only live in love. Love is God. Love life - God! God is everywhere."*
> *- Bruno Gröning*

Each Individual Has Free Will

Each person decides for self; whether they believe in good-health or in ill-health. Healing, cannot be forced on anyone. For, Each Must decide for themselves. This is a vital aspect; man was given Free Will; a gift that God has bestowed upon mankind.

The Regelungen Process

Regelungen: The Cleansing of the Body may at first cause pain.

> *"What needs to be done when the sour milk in the jug needs to be replaced by fresh milk? First the sour milk must be poured out, and the jug cleaned. And in the same manner it is with the human body. Each person, must first separate himself mentally from the illness [pour then out the sour milk]; for the body must be cleansed of impurities [Regelung pains]; and only when the vessel is clean, can the fresh milk be poured in; Health moves into the body." - Bruno Gröning*

The Heilstrom Process

Life streams from the divine power source.

This divine power "Heilstrom."

In order to explain the nature of the Heilstrom, one can compare God to an electric power station, and man to a light bulb.

The Einstellen Process

The conscious absorption of the Heilstrom is called "Einstellen." It is important for the individual to sit quietly, block out distracting thoughts, and pay attention to what is taking place in the body. Bruno Gröning constantly asked his listeners what they felt: "You have only to do einstellen in order to receive the true, divine transmission. Or, to put it better, attain it. You will determine how to attain this transmission. But I must repeatedly say, this will happen only when you really observe your body, paying attention to what is happening in it, much less to what's happening around it, rather just inside it, in your own body." Everyone can experience the Heilstrom in their body. For one person it is a subtle tingling sensation; for another it is a feeling of heat or cold. Others find themselves compelled to move their arms or legs, or may have to shake themselves. A Healing Stream; may elicit, diverse reactions in people. Einstellen "tuning in", is the required correct physical and mental attitude for receiving the divine Heilstrom.

Heilstrom is the Spiritual Force that brings about the healing. How can a person absorb the Heilstrom and open himself to this divine energy? Bruno Gröning recommended the following body posture: Sit upright, keeping the back free. The arms and legs not to be crossed; with the palms of the hands facing upward, and resting on the lap. It is important to switch off distracting thoughts and concentrate on what is taking place in your body. An open, sincere mental attitude is a pre-condition. In this manner, a person opens himself for the Heilstrom to flow in.

Please Separate Self From Illness and Believe in Health

Mentally engaging with the illness; it means one is holding onto it. Bruno Gröning appealed to people to change their ways, and reminded them that they had to put their belief in all that which is good into action; and leave behind bad habits. Firstly, Bruno Gröning urged people not to think about illness.

For, to do so, it is to occupy oneself with it., and this hinders the healing process: "To engage with illness is to hold on to it, and block the path of divine energy." The individual must separate themselves from the illness, not regard it as their property. "Illness does not belong to any human being!" Thus, Place Any Illness in the Hands of The Lord: "Give the Lord your illness, and your worries! The Lord will bear them for you, but, give it to the Lord with conviction.

Whoever loves their illness holds on to it, but whoever forgets about it, it shall be taken from them. The Lord will take away all your illness. If you just place it in His hands." Then, why worry; when ye may pray?

For He hath promised: "Though ye are afar off, if ye call I will hear; and will answer speedily." - Isaiah 65:24; As much as practical, leave off worry.

Know that there is that trust, that faith, that hope in the Creative Forces, which may cast out fear. Why worry? For worry only makes matters worse. Pray, rather than worry. He answereth prayer.

The Cause of Illness

Whenever the connection to the divine power source is missing. Then illness will suddenly appear.

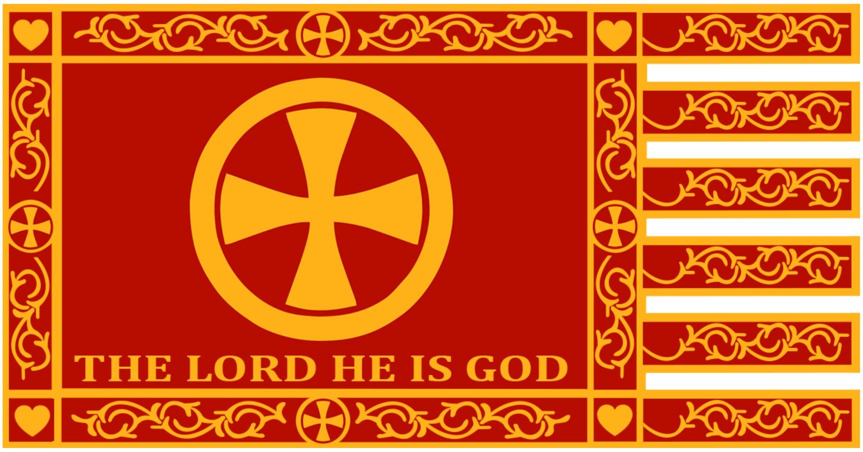
For indeed, the event of illness, it's not just mere coincidence.

Christ Set Love Higher Than Law As Illustrated By His Story of The Good Samaritan

The Teachings of the Master, who had given so full and complete an interpretation of God as the Father, God as Love, God as Patience, God as Longsuffering.

> ***"When Mary brought forth the Word of God in the flesh, something happened cosmically which, until that moment, had happened each time a woman proved to herself and others that her pregnancy was real by bearing the child she hoped for. The prophets were fulfilled. In my opinion, Christ opened our eyes, in a unique and definite way."*** *- Ivan Illich, in "The Rivers North of the Future; The testament of Ivan Illich", 2005.*

> ***"Neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come; Nor height, nor depth, nor any other creature, shall be able to separate us from the love of God, which is in Christ Jesus our Lord."*** *- Romans 8:38 -39*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